

## Artificial Intelligence and Machine Learning -- New Age Tools



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# FROM THE DESK OF CHAIRMAN

Dear Friends,

Warm greetings to the state of Goa on its “Statehood Day” on 30th May.

We would like to state that on 28th May the Institute celebrated its 62nd Foundation Day. It was indeed a pleasure to share the joyous moments in presence on all of us in social media and digital platforms. WIRC had created the Facebook Frames and Instagram filters which were used by more than 5k people to mark the occasion with joy and fervour. We did a session on Facebook live to celebrate the occasion on the eve and had more than 1000+ views. We acknowledge and appreciate the innovative and creative thinking of the Social Media Army of WIRC and all kudos to them.

WIRC had organised a Blood donation camp at various locations as well as at its new branch Office at Thane. I salute all the members who had come forward in such a difficult time for such a social cause. As the situation improves, we will make all facilities available to our Members & Students.

MCA & Income Tax launched their new look websites. From the first look, portals are becoming much more user friendly, easy to access the required information and enabling the common man to do routine tasks on their own without any aid of an expert. Such a situation would enable the role of professional to enhance value from the return filer to a domain expert. The Income tax authorities have relaxed the timelines for tax filings so that the business do not get affected on account of the changes happening around.

The Results of CMA Campus Placement in May 2021 was excellent even in this pandemic situation. I am delighted to share till date more than 100 CMA Freshers from Mumbai have been placed. Out of the four regions we are proud to say that Mumbai campus had the highest placement ratio of the shortlisted candidates to selected candidates. All credit goes to all of our trainers & faculties who have made the students employable. We should highlight that Accenture Technology Consulting offered a CTC of Rs.22 lakh p.a. which is all time highest in the Campus Placement record of the Institute.

WIRC has started coaching students first time in the month of May and the response was fantastic. The Final students were able to utilise the time effectively in learning and preparing themselves for a bright career. We are in the process of finalising the crash course to prepare our students for the forthcoming exams.

The hands on training on Excel was also well received by the members & students. Infact we had encouraged the staff members of WIRC & Chapters to learn this important tool. We will be scheduling such training on Word as well as on PowerPoint soon for giving an edge to our members and students.

Greetings on the occasion of World Bicycle Day, and World Environment Day on 3rd June and 5th June respectively. Look forward for your active participation in events & programs organised on every such occasion for the involvement of all for the benefit of the profession.

Jai Hind

With Warm Regards

**CMA Harshad S Deshpande**  
*Chairman, ICAI-WIRC*

## Activities Undertaken during May 2021 at WIRC

- Webinar on Amendments in Companies Bill– 8th May 2021 by CMA V.C. Kothari, Practicing Cost Accountant
- Five Days Advanced Excel Training Program specially designed for Members by CMA Shaikh Imran, Corporate Trainer for Office Productivity Tools & Tally Prime from 10th May to 14th May 2021
- Five Days Advanced Excel Training Program specially designed for Students by CMA Shaikh Imran, Corporate Trainer for Office Productivity Tools & Tally Prime from 17th May to 21st May 2021.
- Webinar on GDP – An analysis jointly with Bharuch Ankleshwar Chapter on 22nd May 2021 by CMA Raj Mullick, Sr Executive Vice President, Reliance Industries Ltd
- Celebrated the Foundation Day of the Institute on 28th May 2021 by organising Blood Donation Camp at New Office premises of Thane SMFC.
- Facebook Live on the occasion of Celebration of 62nd Foundation Day of the Institute
- Webinar on Rain Water Harvesting jointly organized with Bharuch Ankleshwar Chapter on 5th June 2021 by Shri Yogendra Giri.
- Webinar on Labour Reforms & Need of New HR Strategy jointly with Indore Dewas Chapter of ICAI on 6th June 2021 by CMA Ashok B. Nawal.

### What WE could achieve during 8th month

Status # Agenda 21	Completed	Total
Upto May 2021	17	21

- # Agenda 3      Focused Workshops/Trainings for members every month on Online Platform for emerging opportunities both in employment as well as in practice like IND AS / Analytics & AI / SAP & ERP / Insolvency Professional / Forensic Auditing /Valuation etc.
- Five Days Advanced Excel Training Programme**
- # Agenda 4      Structured Campus placements & creating platform for job openings for experienced & fresher CMAs post disruption of Pandemic.
- Mumbai Campus Placement for Freshers (Dec. 20 batch)**
- # Agenda 7      PD/CEP Programmes in all small chapters periodically jointly by ICAI-WIRC minimum 2 programs in year
- Webinar on GDP –An analysis jointly with Bharuch Ankleshwar Chapter on 22nd May 2021**
- Webinar on Rain Water Harvesting jointly with Bharuch Ankleshwar Chapter on 5th June 2021 by Shri Yogendra Giri.**
- Webinar on Labour Reforms & Need of New HR Strategy jointly with Indore Dewas Chapter of ICAI on 6th June 2021 by CMA Ashok B. Nawal.**
- # Agenda 9.      Membership Drive & a drive to connect CMAs to 'Benevolent Fund' Scheme
- 47 new members enrolled during last month**
- # Agenda 10      Skill Development / Training for Staff Members of ICAI-WIRC and Chapters under ICAI-WIRC
- Five Days Advanced Excel Training Programme**
- # Agenda 12      Social Media Campaigns & Digital Marketing for Visibility & Branding of Profession
- Flyer on Why to Join CMA Course**
- Celebrations on 62nd Foundation Day of our Institute through social media**
- Membership Drive - Welcome New members on Social Media**
- # Agenda 21      Sports, Music, Trekking and other extra-curricular activities like Organizing Sports events, Trekking events, Cycle tour, Music / Art workshops etc.
- Blood Donation Camp on 28th May 2021**



FROM DESK OF CHIEF EDITOR

Dear CMA Professional Colleagues,  
Happy Foundation Day!!!!!!

With downward trend of 2nd wave of COVID, commercial activities are now restarting. We all now getting busy in finalisation of FY 2020-21 and annual audit related activities. Due the various new technologies, finalisation and auditing work becoming very easy and fast. Corporates now able to complete finalisation very fast after completion of financial period. Artificial Intelligence and Machine learning help in many ways to complete finalisation and auditing work. It became part of our daily life. Theme of this bulletin is "**Artificial Intelligence and Machine learning - New Age Tools**". We have received good response from members. Articles on the theme are published as the cover story. Articles on other professional matters are also published in the bulletin. I am thankful to all the authors for providing articles and making WIRC bulletin a Knowledge Pack.

We have also started publishing interview of CMAs who had reached a respectable position like CFO, VP, Director etc. Objective of the same is to share their experience with CMA fraternity. It will inspire young CMAs for making their career brighter. In this bulletin, we have published interview of **CMA Uttam Bhandari, Associated Vice President (Finance & Accounts) VPJ Group of Companies**. I am thankful to CMA Malhar Dalwadi for conducting the interview. I request our proud CMAs those who are reached at highest position during their career to share their experience with CMA fraternity. Please reach us so that we can conduct interview.

Women empowerment is also one of the needs of the hour. We have also decided to publish at least one article from lady CMA in every bulletin. I am happy to inform you that, we have received excellent response from lady CMAs.

We have started "**GST Corner**" in the bulletin. GST corner contains major update related to GST during past month and due dates of GST for the current month. I am thankful to CMA Vandit Trivedi for compiling GST updates.

We have started "**Direct Tax Corner**" in the bulletin. Direct Tax corner contains major update related to Direct Tax during past month and due dates of Direct Tax for current month. I am thankful to CMA Harshesh Pandya for compiling the updates.

WIRC had decided to invite advertisement from PCMAs and also from firm of PCMAs for recruitment of CMA trainees. We are also inviting advertisement from corporates. Rate chart for advertisement is given in the Bulletin.

I urge the members to share knowledge by way of article to make WIRC Bulletins Knowledge Pack.

We welcome suggestions and feedback for betterment of WIRC Bulletin.

Happy Reading!!!!!!!!!!!!

With Warm Regards

**CMA Ashish Bhavsar**  
Chairman, Editorial Board

# Artificial Intelligence and Machine Learning – New Age tools

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Artificial Intelligence is consisting of two word “Artificial” and “Intelligence”. In simple word “it is a manmade thinking power”. Machine Learning is also consisting of two words, “Machine” and “Learning”. In simple word “A machine (Computer) capable of learning from past (data)”.

Artificial Intelligence (AI) and Machine Learning (ML) are two most trending technologies of modern world. They are co-related to each other and capable of creating intelligent and smart system. Artificial Intelligence does not require to pre-program, but it works based on its own intelligence. It uses Machine Learning algorithms and Deep Learning neural network.

It is a new age tool of business management, defense, agriculture sector, weather forecast, health sector, financial management and disaster management. It is highly useful when data size is so huge that it is impossible to handle manually and draw a logical information. It also used for data mining from various sources (Digital, visual, oral etc.) and arranging the data for further processing.

Example- “Go straight and take left turn after 500 meters” is a well-known female voice, when “Google Map” is being used to reach any destination. Google Map guides & instruct the driver, suggest alternate route, estimate time of reaching destination, inform traffic & road condition etc. It is a live example of Artificial Intelligence being experienced & used by most of us on a day-to-day basis. Let us discuss Artificial Intelligence vs Human Intelligence.

## A. Human Intelligence (Brain) & Artificial Intelligence

The human brain consists of two symmetrical parts with partition at center. The Left brain and the right brain. The Left brain controls the muscle of right side of body and vice versa. It is general believe that one part of brain is more dominant over other. Left brain dominant persons are more logical & methodical whereas right brain dominant personal are more emotional and creative (Out of box thinking, art etc.). So, the human intelligence is classified under four categories.

1. Think Logically
2. Think emotionally
3. Act logically
4. Act emotionally.

Artificial Intelligence are being developed to replicate above four intelligence of human being. Smart computers are capable to think and act logically, but not

able to think and act emotionally. Artificial Intelligence imitate the logical or rational thinking of human being with ease at very faster speed.

## B. Artificial Intelligence (AI)

It is a branch of computer science, which concern with building smart machine capable of imitating human intelligence. The basic purpose of AI is to perform certain task by substituting human intelligence. The ultimate goal of AI is to develop reasoning, learning and creating perception like human being by computers.

The growing size of data base (because of digitalization of information) and availability of powerful computer systems has facilitated, the faster growth in the field of Artificial Intelligence. Presently, it is virtually impacting the basic functioning of every industry and expected to dominate the future as well. It is being identified as most important tool for future generation. The industry, region or economy stronger in Artificial Intelligence will lead the world and create enough wealth for themselves.

It is neither advisable nor feasible to ignore development in the field of AI. Artificial Intelligence has a very wide scope i.e. is set of many subsets and most popular among all subsets are Machine learning and Deep learning.

Machine Learning – Under machine learning, past data are compiled and analyzed to formulate the behavior (mathematical equation) dependent variable vs change in independent variable. Thus, it is a projection of future event based on formulation of past data.

Deep Learning – Deep Learning is very closure to machine learning. Only difference is that the input data runs through biologically inspired neural network architect in Deep Learning. There is absence of various layer in Machine Learning.

The biologically inspired neural network is consist of number of layers and data is processed through them. The numbers of layers allow the machine to go “deep” in its learning for making connections and weighting input for the best results.

## C. Type of Artificial Intelligence

The Artificial Intelligence are divided in three categories. Presently we are dealing with Weak AI and General AI. The Strong AI is the future of AI.

1. Narrow or Weak Artificial Intelligence (Weak AI) - It is a simulation of normal human mind and mainly focus

on performing single task. It operates under various constraints and limitation with ease and high efficiency. It is mainly used for repetitive job or routine activities.

Computer playing chess, auto driven car, heat seeking missiles, robotics used for painting or performing crucial job in Industries and detecting bank fraud by flagging unusual transaction (Deposit & Withdrawal) are good examples of Narrow or Weak Artificial Intelligence. With development of Technology the usage of Narrow Artificial Intelligence is increasing exponentially in Defense, banking, Health sector, manufacturing Industries, metrology department and space science.

Latest example of Weak Artificial Intelligence has been exhibited in Israel-Hamas Battle of May 2021. The Hamas attacked Israel with more than 1,000 missiles in a day. The Israeli “Iron Dom” identified and tracked the trajectory of all Rocket & Missile coming towards it and fired counter missile to neutralize incoming missile in air. The Iron Dome achieved the success rate more than 90% and saved Israel from major disaster successfully. The success rate and response time of Iron Dom was excellent and superior than human being.



[Photo 1 – Israel and Hamas battle – Hamas fired many missiles and Israeli counter attack to neutralize Hamas’s missile. Source - internet]

2. Artificial General Intelligence (AGI) – It is simulation of above average human mind. It performs many tasks with high accuracy under various constraints and limitations. If Weak Artificial Intelligence is equal to person of single skill, then multiskilled person is equal to Artificial General Intelligence.
3. Strong Artificial Intelligence (Strong AI) – Researchers are in process of developing Strong AI, which is equivalent to human intelligence. Artificial General Intelligence (AGI) augmented with Artificial Biological Intelligence (ABI) can replicate human intelligence. However, it is not yet developed and still in the mind of scientist and fiction writers.

#### D. Machine Learning

Machine Learning is part of Artificial Intelligence (AI). The basic steps of ML are collection of past data, analyze the behavioral pattern and make decision based on these patterns with minimum human intervention. Most

important challenge of Machine learning is handling large data and finding right model of high confidence level. Machine Learning accepts structured and semi structured data.

Real-life data are collected from various source. So, the data formats are not uniform. It is available in various size / shape, messy and incomplete format. It is required to combine these data received from various source in different format into a uniform stream of information. So, pre-processing of data with help of specialize tools is most important steps of Machine Learning. Different type of data requires different type of module to process the data adequately.

Selecting best model is a time-consuming activity. Trial and error are the core of Machine Learning. If one algorithm fails, try the other one in a systematic approach, till most appropriate algorithm is located. The complete sequence of Machine Learning is as under.

1. Data mining - Collecting data from various sources.
2. Processing the data – Converting data of different size, shape and format to usable format.
3. Derive algorithms – Derive best algorithms model based on data mined.
4. Train module – Train the model to use the data successfully.
5. Iterate – Iterate the model to identify the best suited module.
6. Integration – Integrate the trained module to production system

#### E. Important Terminology

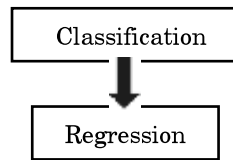
Important terminology used in Machine learning are as under

1. Regression – It is a line or curve that passes through all data points in such a way that the vertical distance between graph line and actual data point are minimum.
2. Dependent or Target Variable – The variable we wish to predict or understand.
3. Independent Variable or Predictor – The variable which affect dependent variable.
4. Outliner – Outliner are either very low value or very high value, which generally ignored while calculating or testing the module.
5. Overfitting – When algorithms module works well with training data set but not with test data, it is called overfitting.
6. Underfitting – When algorithm module neither work well with training data nor with test data, it is called Underfitting.
7. Multicollinearity – When independent variables are correlated to each other more than dependent variables.

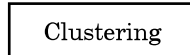
#### F. Type of Machine Learning

Machine Learning is broadly divided in three categories as under

1. **Supervised Learning – Supervised Learning** builds models to predict outcome in case of uncertainty based on known set of input data and known set of response. The basic steps of Supervised Learning are



2. **Unsupervised Learning – It reveals hidden structures and pattern of a given data set.** Clustering is the most common technique used in Unsupervised Learning. It is used for application like object recognition.



3. **Reinforcement Learning – It is mostly used in games.**

### G. Type of regressions

Various type of regression used in algorithms model, important among them are as under.

1. **Linear Regression – It is most simple form of regression and assumed to be of dependent variable of continuous nature.** Model depicting annual rain fall and grain production. Grain production (dependent Variable) is dependent upon rainfall (independent Variable) in the area.

Model calculating arrival of sugarcane at sugar factory gate. Sugarcane harvesting quantity is dependent variable follow Linear regression models and depends upon no of harvester employed, which is an independent variable. The basic equation of Linear regression looks like

$$Y = a + bX$$

Y = dependent variables (target variables),

X = Independent variables (predictor variables),

a and b are the linear coefficients



[Photo 2 – Sugar Cane harvesting Process  
Source – Contributed by CMA Sunil Shitole]

2. **Logistic Regression – The independent variable can be continuous or binary but dependent variable is always binary (Two categories).** There is two outcome dependent variable (Win or Lose) in election dependence upon many independent variable like (Intensity of Election Campaign, Candidate profile, public perception etc.) The basic equation of logistic regression looks like

$$g(x) = 1 / (1 + e^{-x})$$

g(x) = Output between the 0 and 1 value.

x = input to the function

e = base of natural logarithm.

3. **Polynomial Regression – It is technique to fit nonlinear equation by applying polynomial power of independent variable.** The area of circle (dependent variable) is polynomial equation of radius of circle (independent variable) The Polynomial regression equation looks like

$$Y = a_0 + a_1x + a_2x^2 + a_3x^3 + \dots + a_nx^n$$

Y is the predicted / target output

$a_0, a_1, \dots$  are the regression coefficients.

x is our independent/input variable.

4. **Ridge Regression – It is used in case of overfitting,** when model perform well in training data but poorly in test data. Small amount of bias (penalty) is introduced to achieve long term better predictions. It is one of the most robust versions of linear regression.
5. **Lasso Regression:** It is another regularization technique like ridge regression except penalty terms contain absolute weight in lieu of square of weight.
6. **Bayesian Linear Regression - It is a combination of Linear Regression and ridge regression.** It is more stable than linear regression.
7. **Support Vector Regression – It solve both linear and nonlinear models,** whose algorithm works for continuous variable. The idea of SVR is to minimise error. Support vectors are the datapoints which are nearest to the hyperplane and opposite class.
8. **Decision Tree Regression – It is efficient because of using strong algorithm for predictive analysis.** It looks like a tree having root, stem, branches and leaves.  
Internal node represents the “test”,  
Branch represent the result of the test  
Leaf node represents the final decision or result.  
It is built with starting point, the root node/parent node (dataset). The branches of tree splits into left and right as child nodes (subsets of dataset). The child nodes are further divided into their children node
9. **Random Forest Regression – It performs regression as well as classification tasks.** Most powerful supervised learning algorithms, which combines multiple decision trees and predicts the final output. (average of each tree output). The base model are combined decision trees.

The basic equation is  $h(x) = g_0(x) + g_1(x) + g_2(x) + \dots$

## H. Arguments against Artificial Intelligence & Machine Learning and facts

Major arguments against Artificial Intelligence and related facts can be summaries are as under.

1. **Unemployment** - Industries looking to automate certain activity with help of AI, will reduce manpower requirement and ultimately create mass unemployment. Specially for the country like India, where unemployment is quite high.

**Fact** - Usage of AI will boost economic activity. Expanding economy will create many job opportunities. It will ultimately generate employment.

2. **Threat** - Strong AI may take over human intelligence and human being may not be able to keep pace with computer.

**Fact** - AI is supporting human activities and ultimately it is a tool of improving human efforts and not a threat. AI will complement the human effort of overall prosperity.

3. Usage of AI in the field of defense may create havoc and senseless destruction to humanity, if it falls in hands of ruthless dictator.

**Fact** – These arguments are similar to the phrase “fear of unknown” or “resistance to change”, which is hypothetical in nature. AI will always work under the supervision of human being in supportive role and never as master of human being.

## I. Conclusion

After considering various aspects of arguments against and in favor of AI, it is a big boon for technology savvy country like India. Artificial Intelligence is expected to boost India’s annual growth rate by 1.3% in 2035 (Niti Aayog, 2020). This is a clear indication of growth potential and future prospects of AI. The strong logical thinking of average Indian is having a natural edge over others in AI & ML.

Artificial intelligence is being successfully used for diagnosing patient and treating them in case of pandemic. Banking & Insurance sector are using for fraud detection. Defense is using to track enemy movement including enemy’s rockets & missile. Super markets are forecasting inventory requirement in normal condition and in case of natural calamities. Usage of Artificial Intelligence is expanding exponentially in 21st century and expected to continue in future too. It is expected that it may replacing the human intelligence in many applications

Presently AI & ML is not having foot print in Finance & Accounting function except some specific function in Banking Industries. But AI and ML might be able to perform various accounting and audit task (Vouching, Budgeting, fraud detection, performance appraisal etc.) successfully in future. It is the new age tool having bright future prospects. ■



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31<sup>st</sup> May, 2021

### NOTIFICATION

**Sub: Reschedule of the time table for Foundation, Intermediate and Final course of June, 2021 term of Examinations**

In view of the present acute pandemic situation arising out of the spread of COVID-19, it is hereby notified for information of all concerned that the dates of conducting June, 2021 term of Examinations of the Institute are being rescheduled. The rescheduled time table for Foundation, Intermediate, and Final Course of June, 2021 Examinations will be announced soon.

Those candidates who have already applied will be entitled to appear in the rescheduled examination and the candidates who could not apply will be allowed to submit online Examination Application Form for the rescheduled examination soon.

CMA Kaushik Banerjee  
Secretary



# Artificial Intelligence (AI) as Pathfinder for Automation – Tool to Cost Control & Cost Reduction

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*“Our intelligence is what makes us human, and AI is an extension of that quality.” – Yann André LeCun (French computer scientist) Professor, New York University*

Intelligence is an amalgamation of the logical & critical - thinking & understanding, creativity, reasoning and problem-solving capabilities. Precisely it can be described as the ability to perceive information and to preserve the same as data, which can be applied when required to get useful result.

AI-technologies are created using complex mathematical process. It increases the computing power to deliver faster, more accurate and early forecasts of operational/ service efficiency and complexities than a human expertise. This proficiency of AI is a great tool for cost control & cost reduction for all types of industries.

Kaplan and Haenlein define AI as “a system’s ability to correctly interpret external data, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation”.

Sometimes, AI is confused with Automation, although both of these are fundamentally different. The basic differences between the two can be summarised as follows:

No.	Artificial Intelligence	Automation
1.	It deals with process that makes decision based on the learning from past experience & information.	It is a well pre-set process to do a specific job as per requirement.
2.	It is not for repetitive or monotonous job, rather it analyses the situation and gives probable conclusions.	It is for repetitive and routine jobs based on certain commands and rules already programmed as per requirement of the process.
3.	It does captive learning to evolve better process.	It does not germinate or create any better process to execute the same.
4.	It is capable of interacting with humans and compare the situation based on past learning & experience and act accordingly.	It has no interface to interact with humans while executing a job.

One common objective in both AI and Automation is cost control and cost reduction.

Previously the Industrial Revolutions has happened due to various scientific innovations to produce goods more affordable (cost control & reduction), capacity enhancement, accessible and useful than that could be made by hand or semi automation.

Industrial Revolution	Driving Factors
<ul style="list-style-type: none"> <li>• 1st Industrial Revolution: 1760-1830</li> </ul>	<ul style="list-style-type: none"> <li>– Discovery of James Watt Steam Engine.</li> <li>For automatic running of a machine than manual running</li> </ul>
<ul style="list-style-type: none"> <li>• 2nd Industrial Revolution: 1870-1914</li> </ul>	<ul style="list-style-type: none"> <li>– Electrical Power in factories</li> <li>– Telecommunications</li> <li>– Electro-mechanical control</li> <li>Innovation of better devices for automatic running of machine and communication</li> </ul>
<ul style="list-style-type: none"> <li>• 3rd Industrial Revolution: 1970-2000</li> </ul>	<ul style="list-style-type: none"> <li>– Process automation-DCS, PLC, Sensors, Actuators</li> <li>– Computer numerical machines</li> <li>– New communication devices</li> <li>– Renewable Energy</li> <li>Further better automation process and communication also new energy regimes</li> </ul>

All the above three Industrial revolution emphasise on productivity improvement, product quality and cost reduction through improvisation of automation.

## 4th Industrial Revolution – 2015 till date:

Driving factors-

- Automation through Robotics
- IoT (Internet of Things), Cyber Security
- AI, Big Data, Cloud Computing, Simulation

In the previous three industrial revolution the process upgradation are the results of continuous R&D done by the scientists across the world. Those innovations are directly attributed to human intelligence. Whereas, AI is a core element of the 4th industrial revolution which is driven by machine intelligence.

In the recent era, the concept of application of AI is a paradigm shift of thinking process from human intelligence to machine intelligence.

AI, is the technology which provide machines the ability to learn in an intelligent way by the application of Machine Learning (Learning from experience) techniques which is further integrated with Deep Learning (self-educating machines).

Machine Learning (ML), is an application of AI that provides computer systems the capability to automatically

learn and improve from experience without being explicitly programmed. The primary aim is to allow the computers to learn automatically without human intervention or assistance and regulate actions accordingly.

Deep learning (DL) is a subset of ML that employs a multi-layered structure of algorithms called artificial neural networks that learn by processing data. Artificial neural networks mimic the biological neural networks in the human brain.

The above three objects AI, ML, DL can be encapsulated as: AI is a super set of ML and DL which covers everything to make machines smarter without human intervention. ML refers to an AI system which has an ability to self-learn based on the algorithm. DL is a ML applied to large data base (knowledge tank), to draw out the desired data.

As we have discussed above, though Automation refers to “dump” technology and AI refers to “smart” technology, integration of AI and automation is an Intelligent Automation, which empowered rapid end to end business process automation and stimulate digital transformation. Industries started using AI which has a potential to automate a task smartly and intelligently.

### **AI & ML along with Automation - Tool for Cost Control and Cost Reduction:**

(In the rest of the article - word “AI” will include ML and DL also.)

Cost control and cost reduction in the non-value addition area (Operating Overheads) of a business is the crying need of the day.

#### **Reduction of Operating Overhead Costs with AI:**

##### **A. General and Administrative (G&A) expenses**

McKinsey Global Institute reports that General and Administrative (G&A) expenses is rising faster (~15.4%) than revenue growth (~6%) since 2016, in most of the industries.

G & A functions like Finance, HR, Admin, IT can be benefited significantly by application of AI from cost and quality advantages, since the repetitive nature of their task like data collection, data processing and various other physical work. AI helps identifying the exact task in a particular activity where the automation can be implemented. Research reveals that AI technologies can identify areas to automate almost 80% of all physical work, 70% of data processing, and 64% of data collection tasks.

##### **B. Repair and Maintenance costs**

The unplanned equipment downtime is a huge cost to any manufacturing organisation. AI helps to build the limiting factors of a machine to be in working condition by recognizing the temperature, vibration, and other factors. It is possible to predict the need for maintenance before its’ breakdown, which is called as Predictive Maintenance. Based on the identification of the limiting factors, it can be automated in a machine through sensors.

Predictive maintenance permits manufacturers to predict the condition of a machine in real time. Predictive Maintenance addresses the problems before they occur, rather than waiting for equipment to fail before repair (reactive maintenance) or replacing parts on a strict time-based schedule (preventive maintenance). Predictive Maintenance also helps companies to save money by tailoring maintenance of a component of an equipment, rather than maintenance of the whole machine / equipment. This application in the areas of maintenance extends widely for selecting optimal repair methods which is a cost reducing maintenance module.

According to the McKinsey management consulting firm, a substantial cost can be saved by increasing production line availability by 5 to 15% and reducing maintenance costs by 18 to 25% through predictive maintenance.

##### **C. Inventory control**

The coupling AI with inventory control has developed a significant improvement for those companies which have already implemented it.

AI can predict scenarios from historical events and apply those to present circumstances {like-minimum stock quantity, safety stock management, EOQ, ABC, JIT, raw-material ration of the product- as historical events as well as present circumstances like- pending sales order quantity, reliable vendors, supplier lead time etc.} and has the capacity to understand the magnitude of real-time inventory control dynamics. Following the setting of parameters recommended by AI, automation on the same can be done, which will suggest actions to be taken and even it may act accordingly on its own or with proper approval as per the standard operating practice of the organisation.

AI-enabled inventory control system has the capability to direct the company’s optimal stock levels and to reduce working capital involved in excess stock. AI-based inventory monitoring automation drastically reduces the holding costs of inventory.

According to Statista’s global industry survey, about 50% of the world’s inventory management system is automated with real-time tracking of products, manual error reduction, and inventory optimization.

AI can be used to analyse the performance of vendors & product quality which can lead to potential cost savings, over and above benefiting from the automated inventory management.

#### **Cost reduction – in various areas with AI:**

- A. AI has a competence to improve the overall efficiency of an organisation by minimizing the mistakes due to human error. It also helps to identify an improved version of a machine component available, instead of replacing entire machine. Which help in increasing the efficiency and extends the useful life of the entire machine, ultimately resulting to reduction of cost.

- B. AI can help to automate certain manufacturing / service processes which increases the output and reduce hidden costs. Intelligent Automation saves time and optimizes routine process and task. Time saved can be utilised to cultivate the employees to analyse the business more effectively and can offer intelligent advice and support which will be a multiplier in cost savings
- C. Application of AI is remarkable to upgrade customer service techniques to provide maximum satisfaction to customers and hence increase the brand loyalty, which reduces the expenses on service and increases the sales.
- D. In this era of competition, customer satisfaction plays a vital role for any business organisation. AI chatbots can provide service online at any time of the day with a natural language. It not only leads to customer satisfaction, but also identifies the reasons for customer dissatisfaction. This reduces the cost of maintaining Customer Service department.
- E. To optimize manufacturing supply chains, AI can be used considerably to help business organisation to anticipate market changes. Management proactively

take decision to change the production lines, raw materials, vendors, logistics etc. as per the market requirement. Management can also take advantage of movement from a reactionary/response mindset, to a strategic one for cost effectiveness and business sustainability.

In future boundless opportunities are there to use the power of AI in Cost Control and Cost Reduction. Every aspects of a business can be re-assessed with AI to identify the hidden areas for cost control, which may not be possible by human brain individually.

*“The development of full artificial intelligence could spell the end of the human race...It would take off on its own, and re-design itself at an ever increasing rate. Humans, who are limited by slow biological evolution, couldn’t compete, and would be superseded.”*

— Stephen Hawking told the BBC

#### References:

1. McKinsey Global Institute reports
2. Statista.com

## WIRC welcomes New Associate Members

S.No.	M. No.	Name	City
1	50197	Gupta Varun Vinod Kumar Gupta	Ahmedabad
2	50198	Sane Laukik Gajanan Sane	Mumbai
3	50201	Khatib Adnan Naeem Khatib	Mumbai
4	50202	Ghate Vallabh Pradeep Ghate	Nagpur
5	50203	Shahane Sheetal Yogesh Shahane	Nashik
6	50210	Kudtarkar Rohan Raju Kudtarkar	Thane (West)
7	50213	Dixit Siddharth Dixit	Thane (West)
8	50220	Raut Suraj Harendra Raut	Mumbai
9	50225	Vagrecha Yash Vagrecha	Indore
10	50237	Wad Uday Sharadchandra Wad	Pune
11	50241	Walwante Vandana Vishwanath	Mumbai
12	50248	Shah Hiloni Divyesh Shah	Mumbai
13	50249	Pallay Ankita Ram Pallay	Pune
14	50256	Miranda Joylon John Miranda	Thane
15	50260	Jadeja Indravijaysinh Sukhdevsinh	Ahmedabad
16	50266	Nara Ravi Gyanchand Nara	Ahmedabad
17	50269	Parab Trupti Dhananjay Parab	Mumbai
18	50275	Mehta Saloni Jayesh Mehta	Mumbai
19	50276	Darji Bakul Narendrabhai Darji	Thane
20	50278	Patil Pratik Balasaheb Patil	Mumbai
21	50279	Rajgor Tejal Babulal Rajgor	Kalyan
22	50284	Dadarya Anchal Dadarya	Sagar
23	50295	Sondekar Anuj Ashok Sondekar	Mumbai
24	50299	Deshpande Vivek Sudhir Deshpande	Aurangabad

S.No.	M. No.	Name	City
25	50307	Tarsariya Mihir Nareshbhai Tarsariya	Surat
26	50312	Jadhav Amit Madhukar Jadhav	Nashik
27	50317	Kulkarni Mangesh Madhukar Kulkarni	Mumbai
28	50321	Mehta Malay Bakulbhai Mehta	Bhuj
29	50324	Sirvi Jetharam Bhanaram Sirvi	Navi Mumbai
30	50327	Patel Santosh Kumar Patel	Sing Rauli
31	50328	Razak Noorin Mohammed Razak	Karjat
32	50330	Mahavar Pavan Manojbhai Mahavar	Ahmedabad
33	50331	Thakar Dhruv Pankajbhai Thakar	Ahmedabad
34	50340	Shirodkar Priti Shiriram Shirodkar	Mumbai
35	50341	Gawali Ashish Sanjay Gawali	Pimpri - Chinchwad
36	50344	Borade Tejaswini Prakash Borade	Neral
37	50345	Parikh Heni Chetanbhai Parikh	Vadodara
38	50354	Shekhawat Ritu Shekhawat	Navi Mumbai
39	50356	Jadhav Abhijit Bhagwan Jadhav	Kalyan
40	50366	Gajjar Bhaumik Mukeshbhai Gajjar	Ahmedabad
41	50367	Singh Shyam Singh	Goregaon
42	50368	Nagdev Mohit Nagdev	Vadodara
43	50371	Kale Milind Pravin Kale	Pune
44	50375	Veni Pankti Krunal Veni	Mumbai
45	50378	Yadav Raghuveer Rampher Yadav	Neral
46	50379	Dakhare Harshal Vijay Dakhare	Chandrapur
47	50383	Devkar Yogesh Bandu Devkar	Nashik

# Leveraging AI and ML for Cost Management



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## The Perspective

Cost management has become a competitive necessity. Traditionally, the only time we heard about cost management was when a company was in trouble. They laid off workers, closed manufacturing plants, etc. But the primary reason why most companies do cost management today has nothing to do with a problem that they need to address. What they are trying to do is free up resources and reinvest that money in the firm.

When companies talk about cost management, their focus typically is on slashing their current expenses. But in today's digital era, cost management has taken on a new hue: It provides a strategic lever to generate savings that can be invested in driving growth. Using cost as a strategic lever, as opposed to a defensive response, opens up new opportunities.

In a recent survey carried out by KPMG, it has been observed that the people who have hit their cost targets and saved more money are the ones who have put in new digital technologies. They are putting better forecasting systems in place and better budgeting systems. The big thing we are seeing is the use of technologies like artificial intelligence and machine learning to understand cost structures better, to try to optimize what these companies are doing. But even more than that, with the digital technologies that are now available, you can completely transform the way you do business

## New technologies go beyond what traditional cost management can offer

Drawing on the latest McKinsey research and a series of interviews with experts and industry leaders, it is felt that there is a way to do better, faster: tech-enabled rapid reduction of indirect costs. By indirect costs, we mean those separate from the direct process of manufacturing goods or offering services. Instead, they are shared across the company and are largely fixed. Examples include finance, procurement, HR, marketing, and IT. The tech-enabled cost-reduction approach uses automation, artificial intelligence (AI), Machine Learning (ML) and other technologies to find new opportunities in such areas as capacity reallocation, spending effectiveness, and accounts

receivable. Technological advancements in the field of artificial intelligence will fundamentally change business models in the manufacturing industry in the future because they are speeding up the digitization of processes - and cost management is no exception.

In this article the various aspects and facets of a rapid tech-enabled indirect-cost-reduction effort are explained including what companies need to do to prepare for such a transformation.

## Benefits of AI and ML in Business

AI is helping the business take customer experience to the next level through customer insights. Predictive analysis can be applied to the data to know the better about the customer. This will ultimately help to push the services in a meaningful manner. The right prospect of AI is to provide actionable insights in massive amounts of unstructured data.

- Use customer insight to predict their preferences and offer them better, personalized experience.
- Analysis of the vast amount of data to generate quality leads and grow your customer base
- Upsurge revenue by identifying and maximizing sales opportunities
- Cultivate expertise by enabling analysis and offering intelligent advice and support
- Save time and money by automating and optimizing routine processes and tasks
- Increase productivity and operational efficiencies
- Make smart business decisions based on outcomes from cognitive technologies
- Escape mistakes or 'human error', provided that AI systems are implemented properly.

According to a new KPMG report, *Thriving in an AI World*, 93% of industrial manufacturing respondents indicated they have moderate or fully functional AI, primarily machine learning technologies, implemented into their processes. In particular, AI capabilities are being readily adopted in three areas: defects monitoring, predictive and preventive maintenance, and forecasting accuracy -

allow organizations to streamline their operations and better realize growth opportunities. Importantly, they can also prevent costly defects and avoid operational inefficiencies.

### **Stages of Tech - enabled Cost management**

**approach:** While no two such programs are alike, four stages are common.

**Stage 1: Identify areas of improvement :** Far too often, companies lack transparency on their own costs and processes. The first challenge, then, is to ensure that all relevant information is available. Big data, AI, advanced analytics, data visualization, and process-mining tools can help to identify cost-reduction opportunities in finance, procurement, HR, and production management.

**Stage 2: Automate processes :** The automation of production is hardly news; this has been happening for decades. What is surprising is the extent to which industrial companies have not done the same with their administrative processes, where indirect costs cluster. The premise of is that many of these can and should be automated. The immediate focus should be on technologies that can work quickly, such as robotic process automation (RPA), smart workflows, or data-visualization tools.

**Stage 3: Work smarter :** The greater computing power of AI, machine learning, and data visualization can be used to (semi-) automate decision making and to analyze data in ways that have not previously been possible. This creates a better fact base and improve the quality and efficiency of decision making. For instance, AI and machine learning can automate and improve sales forecasting by analyzing historic and real-time transaction information. These technologies can systematically consider and correlate external effects and then use them to build a simulation model for better cost management.

**Stage 4: Capture impact :** Tracking optimization initiatives is not easy, but there are ways to use technology to follow them from conception to completion. For example, impact-management software can track plans and follow up on initiatives; by connecting with company data, it is possible to track if targets are being met. Establishing a "center of competence" inside the company that has specific responsibility for doing so can help.

**Metrics:** Track the performance of initiatives against relevant business goals, budget, and time frames. The tool should be Use an impact management and tracking tool: Large-scale transformations can fall short when organizations are not sure what they want to achieve or how they want to go about it. An

impact management and tracking tool can help clarify what to do first, and measure what benefits are captured.

### **Building the organizational foundations for tech-enabled cost management**

To manage change of this magnitude, organizations must change, too. There are four important elements.

**Create an agile transformation road map:** To reach the full potential of indirect cost optimization while also managing risk, it is helpful to chart a plan that can be adapted as circumstances change. Doing a complete transformation in one step is just too difficult-it requires too many capabilities and can also provoke resistance. It's better to proceed methodically, starting with select use cases to create momentum and to demonstrate that the process works. Moreover, the savings from the first steps can be used to finance future ones.

**Metrics:** Track the performance of initiatives against relevant business goals, budget, and time frames. Large-scale transformations can fall short when organizations are not sure what they want to achieve or how they want to go about it. An impact management and tracking tool can help clarify what to do first, and measure what benefits are captured.

**Build a center of competence (COC):** Getting impact management and agile transformation right requires overcoming real and perceived barriers. Bundling all related activities in a COC can help. Managed by the transformation leader, and sponsored by the board, a COC should include project managers, as well as technical and change-management experts. Its job is to implement the agile transformation plan. It should also play a leading role in identifying and implementing use cases; coordinate IT activities; and serve as a community-building platform.

**Drive the automation program as an agile transformation:** To overcome real and perceived barriers, realize impact, and change the organization sustainably, some companies have led their automation programs according to agile-enterprise principles. To do so, they are forming agile teams combining subject-matter experts from different areas of the line organization, such as automation and AI consultants, business analysts, and agile coaches.

### **Looking ahead**

As digital transformation continues the prevalence of AI and ML will drive further opportunities for organizations across the industrial manufacturing landscape to assess cost structures. The skill sets required by the industrial manufacturing workforce

will continue to evolve. These days' companies are implementing Artificial Intelligence to become more diverse. Artificial Intelligence is helping the business to find solutions for complex problems in a more human-like manner. Artificial Intelligence is poised to have a transformational impact on business in different dimensions. It helps to lower the costs associated with complex processes. The concepts of artificial intelligence have been around for a long time, but now AI is implemented to transform the way business is done. Artificial Intelligence offers the ability to analyze data across multiple functionalities, scam detection and improve customer relationship management. It is estimated that by 2020, AI will be one of the top five investment priorities for more than 30% of CIOs globally. It is the right time to understand how AI can transform your business and gain a competitive advantage

What is surprising is how many people are now doing this as a growth strategy. It is a fundamentally different way of thinking. People who are embracing digital are not just using it to improve productivity, they have been able to transform their business. This is still in its infancy, but I strongly believe that going forward this is what people are going to have to do. We are moving into a digital world. It is a world that

is changing a lot faster. We have to incorporate that into our organization. Knowledge is expanding a lot faster, so being able to process more information is very important. More importantly, we need to translate that into something that will allow us to make better business decisions.

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## WIRC Webinar Report

- WIRC organised Webinar on Amendments in Companies Bill on 8th May 2021. CMA V.C. Kothari, Practising Cost Accountant was the speaker. The session was well interactive.
- WIRC organised Webinar on GDP - An analysis jointly with Bharuch Ankleshwar Chapter on 22nd May 2021 by CMA Raj Mullick, Sr Executive Vice President, Reliance Industries Ltd was the speaker. CMA Manas Kumar Thakur, Past President of the Institute was guest of honor. Welcome Note was made by CMA Harshad Deshpande, Chairman WIRC. CMA R.A. Mehta & CMA S.N. Mundra introduced guest of honor and speaker respectively. CMA Rajendra Rathi, Vice Chairman, Bharuch Ankleshwar Chapter proposed vote of thanks. Webinar was attended by more than 100 participants.
- WIRC organised Five Days Advanced Excel Training Programme from 10th May to 14th May 2021 specially designed for Members. Same programme was repeated for Students from 17th May to 21st May 2021. CMA Shaikh Imran, Corporate Trainer for Office Productivity Tools & Tally Prime was the speaker
- On the occasion of World Environment Day WIRC has organised Webinar on Rain Water Harvesting jointly with Bharuch Ankleshwar Chapter on 5th June 2021. Shri Yogendra Giri. Volunteer of All World Gayatri Parivar, Shantikunj Haridwar was the speaker. CMA Rajendra Rathi, Vice Chairman, Bharuch Ankleshwar Chapter co-ordinated the webinar.
- WIRC organised Webinar on Labour Reforms & Need of New HR Strategy jointly with Indore Dewas Chapter of ICAI on 6th June 2021. CMA Ashok B. Nawal (Co-Opted member of Indirect Taxation Committee of ICAI (2020-21) was the speaker. CMA Biswarup Basu, President, ICAI was the Chief Guest & CMA Harshad Deshpande, Chairman, WIRC of ICAI was the Guest of Honor for the webinar. The webinar ended with vote of thanks from CMA Aniruddha Gupta, Chairman Indore-Dewas Chapter of ICAI. Webinar was attended by more than 150 participants.

## Celebration of Foundation Day - WIRC

WIRC Celebrated Foundation Day of the Institute on 28th May 2021 by organising Blood Donation Camp at New Office premises of Thane SMFC. Members and Staff Members of WIRC donated Blood. CMA Harshad Deshpande, Chairman WIRC present on the occasion.

# Artificial Intelligence: Transforming Workplace more Human

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Customer satisfaction, customer retention and cost to serve are three key KPIs that ultimately define the long-term profitability of any business. Unlike other industries such as retail, eCommerce or pharma, the role of AI and data science in the manufacturing industry is not widely known. The data generated in the manufacturing industry is hard to capture and therefore lags in leveraging AI in productivity.

These days' companies are implementing Artificial Intelligence to become more diverse. Artificial Intelligence is helping the business to find solutions for complex problems in a more human-like manner. It helps to lower the costs associated with complex processes. The concepts of artificial intelligence have been around for a long time, but now AI is implemented to transform the way business is done.

AI will be one of the top five investment priorities for more than 30% of CIOs (A chief information officer) globally. It is the right time to understand how AI can transform your business and gain a competitive advantage.

Ambitious startups are exploring new opportunities and new solutions for their business growth. Predictive analysis helps in cost reduction on maintenance. Artificial intelligence and machine learning-based solutions have proven time and time again to be effective in cutting costs across multiple industries, with the same cost-reduction strategies also proving to boost productivity.

Artificial Intelligence is helpful for businesses to identify targeted customers proactively. Through actionable sales intelligence, businesses can better analyze a particular buyer purchase behavior. Such strategies are helping the business to make the entire process smooth and planned. More transparency can be created while reducing the cost of complex business practices.

Predictive AI also allows you to create tiered solutions based on customer issue complexity and to influence the efficiency of nearly all interactions in the call center every year. This approach can result in savings for financially stressed businesses in today's challenging times by enabling them to address issues that affect

CX (Customer experience), costs and revenue.

I believe we are just getting started on the AI journey and that it has the potential to disrupt and redefine entire industries. AI will push knowledge workers to enhance their digital skills to ensure a seamless man-machine experience.

As AI becomes ubiquitous, we must manage and maintain trust and ethical standards while designing, developing, and training responsible AI systems. Systems and platforms need to ensure they build transparency into AI-based decision-making to detect and remove biases and augment human creativity.

Young children today are introduced to AI at a very early age in the form of voice assistants, video recommendations, and the likes and I worry about the impact it will have on their ability to make the right ethical choices. How it will influence their thinking and opinions. Hence the need for the right set of regulations and standards for responsible AI that is inclusive of all groups in the human population.

AI is a critical tool for strategic cost reduction that your operations need to remain competitive and weather this storm. And the cultural footprint of machine-learning models seems to only be growing. AI as a cost-cutting tool may get a business so far, but it's going to take more visionary uses of AI to get to the next level.

It appears AI is more a cost-cutting mechanism, versus a mind-expanding strategy. At the same time, businesses at the forefront of AI say that, it will never replace human intelligence. It's a hopeful thought, as 80% of these AI adopters say they don't intend to use AI to throw people out of work, but, rather, retain and retrain employees to fulfill more elevated capacities while AI systems take on the more routine grunt work aspects of their jobs.

Essentially, automation frees companies and their employees up to be more empathetic, to focus on things like the customer experience, employee engagement, and workplace culture. The final way that AI is transforming the workplace: it's making it more human.

# Why CFOs are crazy for implementing AI/ML in key business decisions

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Regrettably, there is a puzzlement within the masses and the social/visual/print media regarding what is purely Artificial Intelligence and what precisely is Machine Learning. In a number of cases, companies are confusing the prospective customers with publicity and cheat them to boost sales and revenue with open declaration that they are adopting AI and Machine Learning technologies in line with current trend. 'The Verge' (Prominent Magazine of technology, science) revealed that 40% of European startups falsely proclaimed to apply AI and ML when they do not use these technologies.

## What is Machine Learning?

Machine learning (ML) is a subset of artificial intelligence, and as per Scientist and Machine Learning pioneer<sup>[19]</sup> Tom M. Mitchell: "Machine learning is the study of computer algorithms that allow computer programs to automatically improve through experience." ML is one of the avenue through which we expect to reach AI. ML depends on mini to big datasets by scrutinizing and correlating the data to discover similar patterns and investigate subtle variation. Businesses are making use of machine learning to apply the massive data so that they develop useful forecast that professionals can utilize to infuse resources and boost their company.

Some Instances of Machine Learning from Day-to-Day Life

### 1. Virtual Personal Assistants

Siri, Alexa, Google Now are some of the familiar examples of virtual personal assistants. They help in searching information, when asked over voice. Only you have to do to put them in motion and question "What is my schedule for today?", "What are the flights from Delhi to Mumbai", or alike questions.

### 2. Forecasting traffic while travel back and forth on road

Google Maps reviews past traffic trends for roads over time and accumulate database of past traffic patterns and compare it with current traffic position.

Figure 1 - How Machine Learning Works



Machine Learning Flow Overview

Source - <https://www.sigmaiq.com/resources/short-primer-on-ai-and-machine-learning-for-cfos>

What is Artificial Intelligence (AI)?

Artificial intelligence (AI), on the other hand, has massive scope. As per Andrew Moore of Professor in School of Computer Science at Carnegie Mellon University, "Artificial intelligence is the science and engineering of making computers behave in ways that, until recently, we thought required human intelligence.

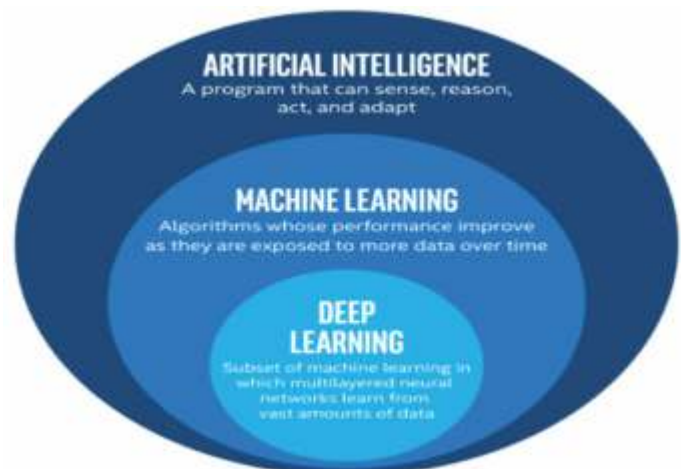
Basically, AI is the extension of computer science. It is the attempt to reproduce human intelligence in machines. The wide-ranging aim of IA has given rise to multiple queries and disputes. Hence, no sole definition of the IA is unanimously agreed. In their innovative book 'Artificial Intelligence: A Modern Approach', Stuart Russell and Peter Norvig defined AI from 4 different approaches :

1. Thinking humanly,
2. Thinking rationally
3. Acting humanly
4. Acting rationally.

Here are few instances where AI are playing their roles-

1. Google Maps and Ride-Hailing Applications
2. Face Detection and Recognition
3. Text Editors or Autocorrect
4. Social Media
5. E-Payments
6. Manufacturing robots.
7. Self-driving cars.
8. Proactive healthcare management.
9. Disease mapping.
10. Automated financial investing.

Figure 2 - Artificial Intelligence, Machine Learning and Deep Learning



Artificial Intelligence is the Broader Concept while Machine Learning & Deep Learning are Specific Approaches

Source - <https://www.sigmaiq.com/resources/short-primer-on-ai-and-machine-learning-for-cfos>



**Here are some instances where ML/AI technologies have been successfully implemented in Corporate world -**

### **1. Merger & Acquisition (M&A)**

Artificial intelligence (AI) provide splendid avenues for companies looking to takeover or be acquired. Due diligence (DD) in M&A is a huge task (DD consists of more than 90% of critical jobs in M&A) of inspecting thousands of contracts and their interpretations. For Due Diligence (DD), a mechanism like AI technology is required with unbiased looking glass for analysis of thousands of contracts having huge financial implication.

#### **A) Completing Deals at Minimum Costs and Least Risk**

With the application of AI/ML technology, it is helping for completing M&A deal at high speed which result in squeezing time and overhead. This is specially applicable for legal aspects of M&A which need processing and scrutiny of volumes of several thousands of pages which consumes over months. This requires more than 70% time of Due Diligence for deal. Legal cost is around 30% of the total billing. AI technology can go through documents, contracts and related data at hectic speed with accuracy at least cost and overhead and pinpoint likely liabilities compared to inexperienced and junior lawyers through manual process at snail pace. In this hectic pace, both parties (Buyer and Seller) can sit over table to sort out the thorny issues in short time. If the problematic issues are sorted out, they will go for deal. Otherwise, both the parties move on other M&A.

#### **B) Avoiding Devasting M&A with Application of AI/ML**

In the whole world, 70% of M&A are unsuccessful. These are manually oriented Due Diligence without any sophisticated application of technology like AI. Buyers in their enthusiasm to get more market share and diversify the product/services, they skip extensive and detailed Due Diligence (DD) which results in devasting acquisitions. Guide by emotion, they feel in such cases, the due diligence process is considered tedious and unnecessary even they barely do DD ignoring glaring problems. AI led technology, makes way for due diligence speedy, and squeezing the manpower needed for the process. Artificial Intelligence drops the emotions, any bias and makes decisions risk-free. AI led technology brings full transparency in the deal of M&A.

### **2. Better Security For Your Business**

Hacking is a business for criminals. Hacking is a dirty, illegal attempt by any individual or an organization to encroach and access the data of another individual or an entity. In general, the encroacher wants to grab a potential benefit from disruption of others' network. Cyber security is currently glaring problem for all businesses irrespective of the sectors. Worldwide hackers attack every seconds 35 times and 1,26,000 Times an Hour. Total Damage to US Economy (0.64% GDP) \$100 Billion annually. For Cyber Attack, US

loses 5,00,000 Number of Jobs annually. Number of Cyber Crime in India is 131.2 Million in 2019. Cyber criminals stole Rs.1.23 Trillions in India in 2019. Now, courtesy Machine Learning, cyber security issues can be successfully handled. The hackers are very skilled and Triple A Grade Professionals. They also use sophisticated softwares and smarter to counter your move.

However, with the appropriate application of ML/AI technologies, illegal encroachments and crimes along with fraud by hackers can be avoided. With advancement of MI/AI technology over time, now app and software are being so installed, they can detect any sense of fraud with unusual behaviors of other software and automatically adjust themselves to counter any move by hackers. It is a boon for all users of ML/AL technology over the globe which saves billion of \$ and avoid innumerable disruptions of the flow of productive work.

### **3. Embezzlement and Expense Fraud**

Fraud inside the organization is difficult to pinpoint, anticipate and control. It is disjointed – not leaving a clear pattern. It is frequently committed in small way and get away detection. Overall, the offenders may deliberately twist the data sequence to avoid detection. Expense deceit (misappropriation) itself is anticipated costing corporates US\$1.8 billion per year. While handling these types risks, there are many ramifications in the areas of legal, tax, and financial which can divert CFOs from more core issues. Courtesy artificial intelligence technology, they can analyze expense data and pinpoint dubious transactions claims. It can interpret expense patterns and conducts of staff irrespective of designation. Also, machine learning technology can pin down and forecast same conduct of staff who fudge or overstate claims. With this process, CFO can predict likely expense of fraud before it occurs.

### **4. Prediction and Management of Bad Debt**

As per to the US tax authorities<sup>1</sup>, bad debt amounts to 0.5% of US firms' revenues. In 2018, over US\$100 billion was lost because of bad debt, slashing margins of bottom line by as much as 5%. Artificial intelligence enables the CFO to forecast which customers will pay in time, which customers will be delaying in paying, or which customers will fail to pay. With application of IA, a correlational analysis with statistical data analysis procedure involving more than one measurement (A multivariate analysis) of B2B customer data such as sector-wise industry, credit rating, product buying and salesman can predict of the possibility as to whether a company will pay its dues and also whether a customer should be offered more time for credit. Otherwise, pinpointing of possible defaulters helps in customer grading and credit approvals. Predictive analytics may be applied to read the correlation between the pay structure of salesmen and bad debt. It may divulge that more defaults of payment are arising from particular

salesman who has extended more liberal credit to obtain aggressive sales incentives. In long term scenario, it also gives lessons and predictions of defaults under different circumstances.

## 5. Logistic Solutions

The logistics and retail industries are forced to be a part of the data analytics and machine learning areas by default since in the fiercely competitive market they will have to save each paise in each item of the expense. Machine learning is pushing each company to upgrade their logistics through better competence in every sphere whether be it shipping, storage and sales process. This technology also allows progress of businesses to combine autonomous driving into their group of ships, planes, or trucks operated under unified control fleets.

Global shipping companies are applying Machine Learning to boost bottom line. These companies are positioning innumerable parts on their cargo vessels, big trailer truck and smaller equipment. This assists respective executives to pinpoint linear tendencies of breakdown and install preventative maintenance schedules that make uninterrupted movement of their ships and trucks .

Front runner in logistic in application of Machine Learning is Amazon which is monolithic organization in Online Retail. They are boosting the efficiency its delivery network with forecast of customer requirements. Through Machine Learning technology, Amazon evolved “anticipatory shipping” protocol which allows it to forecast the movement of particular items of the order and their simultaneous movement throughout the globe. On the basis of such evolving information, Amazon despatches regular items like mobile and phone components and other domestic items to different centres for distribution before purchase of all items. It saves huge time and money which otherwise blocked in inventory over indefinite time.

## 6. Manufacturing

The manufacturing industry has already started combining with AI/ Machine Learning technology into every step of production. The reason being, ML/AI technology is prompting squeezing expense and cut down the budget by economizing inventory management with more production, with higher efficiency, with seamless maintenance of machineries having least breakdown.

The manufacturing industry has the huge amount of data created each day. With the help of ML/AI, these systems forecast maximum point of annual manufacturing and downtimes and to recommend process improvements. They also do not make erratic shutdowns and do programs of seamless maintenance which reduce cost. As per McKinsey, ML along with AI boost 13% revenue, economize 12% fuel and shorten 30% delivery time of raw materials and finished goods in the manufacturing process.

## 7. Consumer data

Over the decades, companies were engaged in collecting tons of data about their customers, including purchasing habits, socio-economic detector, income and the likes. These data are prized catches like cash cows which generate bottom line at present and future. MI/ AI technology along with Python software is giving opportunity to these companies to cash these data to generate cutting-edge data analytics programme for accumulating fruitful information and pragmatic forecast. With the help of technology, these companies make tailor made case to case customer profiles, to refine search results and elevate the user design. With the use of these technologies, companies are competing successfully with companies like Amazon and Netflix in their respective sectors.

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# Digitalisation of Agreements



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## Introduction:

In the era of digitalisation where you have option to have a meeting without physical presence, a mail is a click away from recipient, a video lecture(webinar) can be addressed to large audience, returns can be uploaded in various government portal and so many other positive changes exaggerated the constraint of physical presence.

Likewise, a Contract can be executed without using a paper and Pen with some limitation and following prescribed rules.

In addition, the Concept of digital Bharat is not only appreciated and promoted by the Indian Government but also considered as Trillion dollar digital Economy, from Aadhar to E-Payment government promoted digitalisation of documents.

However, many scholars still believe the contract printed on green legal paper, duly initial on every page and signed with rubber stamp is only valid and binding in the court of Law.

As CMA, we have seen various work orders, agreements, Letters, draft in Electronic forms, but sometimes legality of the same created confusion in our Professional life. Further, as the role of CMA is not restricted only to the Costing and management assignment but also to be extended to the vetting and drafting of contracts. With the unavailability of In-House-Legal team or External Legal Team , CMA professional tend to give our opinion in regards to the sanity of the documents, thus understanding of execution of E-Agreement is important and relevant.

## Meaning and Definition of E-Contracts:

Traditionally, the contracts were paper based, but with the introduction of internet, businesses are departing from the notion of traditional based contracts and are going online.

Thus, shift from paper based contracts to online contracts has led to the emergence of new species of contract i.e. “electronic contracts”. It means a contract formed electronically.

## Definition:

The UNCITRAL Model Law on Electronic Commerce instead of defining in Article 11. Formation and validity of contracts as In the context of contract formation, unless otherwise agreed by the parties, an offer and the acceptance of an offer may be expressed by means of data messages. Where a data message is used in the formation of a contract, that contract shall not be denied validity or enforceability on the sole ground that a data message was used for that purpose.

Further, in Article 12 of the UNCITRAL Model Law on Electronic Commerce Guide to Enactment with 1996 says that Recognition by parties of data messages (1) As between the originator and the addressee of a data message, a declaration of will or other statement shall not be denied legal effect, validity or enforceability solely on the grounds that it is in the

form of a data message.

The Information Technology Act, 2000, defines ‘data’ as a representation of information, knowledge, facts, concepts or instructions which are prepared or have been prepared in a formalised manner, and is intended to be processed, is being processed or has been processed in a computer system or a computer network, and may on any form (including computer printouts, magnetic or optical storage media, punched cards, punched tapes) or stored internally in the memory of the computer.

## Essential of E-Contracts

In India, the Indian Contract Act, 1872 governs all agreements and contracts, including E-contracts. Simply put, a contract is a legally binding agreement and the Information Technology Act, 2000 provide legal recognition for transactions carried out by means of electronic data interchange and other means of electronic communication.

Further, the General Assembly of the United Nations by resolution A/RES/51/162, dated the 30th January, 1997 has adopted the Model Law on Electronic Commerce adopted by the United Nations Commission on International Trade Law .

The Information Technology Act, 2000, identifies three parties to the electronic transmission process:

- **Originator** of data message means “ the person by whom or on whose behalf, the data message purports to be sent or generated prior to storage, if any, but it does not include a person acting as an intermediary with respect to data message.”
- **Intermediary** with respect to any particular electronic message means” any person who on behalf of any other person receives stores or transmits that message or provides any service with respect to that message”.
- **Addressee** means a person who is intended by the originator to receive the electronic record but does not include any intermediary”

**Thus,**

- Provisions related to the Indian Contract Act, 1872 to be adhere.
- Electronic Governance and Legal recognition of electronic records as specified in the Information Technology Act, 2000 should be complied.

## Type of E-Agreement

Some of the most common forms of e-contracts are click wrap, browse wrap and shrink-wrap contracts

1. **A clickwrap or clickthrough agreement** is a digital prompt that offers individuals the opportunity to accept or decline a digitally-mediated policy.

2. **A browse wrap agreement** is intended to be binding on the contracting party by the mere use (or browse) of the website.
3. **Shrink-wrap agreement** the contracting party can read the terms and conditions only after opening the box within which the product (commonly a license) is packed.

### Advantages

- Ease of Use
- Low Transaction Cost
- Time Saving
- Enhanced Security (The digital signatures attached to the document makes it secure as it cannot be copied-fake signature)

### World Towards E-Contracts

Many countries follow the practice to execute the e-contract only. As the Companies like DocuSign, Inc., NASDAQ Listed American company that allows organizations to manage electronic agreements. As part of the Agreement Cloud, DocuSign offers eSignature, a way to sign electronically on different devices. DocuSign claims it has over 475,000 customers and hundreds of millions of users in more than 180 countries. [6]

Signatures processed by DocuSign are compliant with the US ESIGN Act and the European Union's .

### Specific Exclusions

In particular, the IT Act 2000 excludes from electronic transactions the following documents:

- Negotiable Instruments
- Power of Attorney
- Trust Deed
- Will
- Sale Deed or Conveyance deed with respect to the immovable property of any documents relating to any interest in an immovable property. Documents or Transactions to which the Act Shall Not Apply

### Admissibility in Court Of India

- Courts in India have taken a favourable stance towards enforcing electronic contracts, an instance of which is given above. However, there is a lack of specific jurisprudence on e-sign in India. From an evidentiary standpoint, the admissibility of an e-contract as 'evidence' is governed by the Indian Evidence Act 1872 (Evidence Act).
- a conjoined reading of IT Act and Evidence Act vests presumptive value in e-sign rendered by way of digital signature or Aadhaar e-sign similar to wet ink signature and in case of litigation, the burden of proof would rest on the party challenging the authenticity of digital signature or Aadhaar e-sign.
- As per the IT (Amendment) Act, 2008, Section 79A empowers the central government to appoint any department, body or agency as examiner of electronic evidence for providing expert opinion on electronic form of evidence before any court or authority.
- The Madras High Court in Tamil Nadu Organic Private

Ltd v. State Bank of India, AIR 2014 Mad 103, observed that "contractual liabilities could arise by way of electronic means and that such contracts could be enforced through law." The High Court further stated that Section 10A of the IT Act enables the use of electronic records and electronic means for the conclusion of agreements, contracts and for other purposes.

In State of Delhi vs Mohd Afzal & Others, 2003(3) 11 JCC 1669 it was held that electronic records are admissible as evidence. If someone challenges the accuracy of a computer evidence or electronic record on the grounds of misuse of system or operating failure or interpolation, then the person challenging it must prove the same beyond reasonable doubt. The court observed that mere theoretical and general apprehensions cannot make clear evidence defective and inadmissible. This case has well demonstrated the admissibility of electronic evidence in various forms in Indian courts.

The evidentiary value of e-contracts can be well understood in the light of the following sections of Indian Evidence Act. Section 65B relates to the admissibility of electronic record.

The above mentioned sections can be explained as follows:

Section 65B: Section 65B talks about admissibility of electronic records. It says that any information contained in an electronic record which is printed on a paper or stored/recorded/copied on optical/magnetic media produced by a computer shall be deemed to be a document and is admissible as evidence in any proceeding without further proof of the original, in case the following conditions are satisfied:

### The 4 Required Conditions:

- a) The computer output containing such information should have been produced by the computer during the period when the computer was used regularly to store or process information for the purpose of any activities regularly carried on during that period by the person having lawful control over the use of the computer.
- b) During such period, information of the kind contained in the electronic record was regularly fed into the computer in the ordinary course of such activities.
- c) Throughout the material part of such period, the computer must have been operating properly. In case the computer was not properly operating during such period, it must be shown that this did not affect the electronic record or the accuracy of the contents.
- d) The information contained in the electronic record should be such as reproduces or is derived from such information fed into the computer in the ordinary course of such activities.

### Concluding Remarks

E-Contracts are appropriate to re-structure the business environment and create the good composite of technologies, commerce, processes and strategies, which saves not only cost and time but also fasten the relationship with other party in order to be transparent and automated process, however as there is risk of security, hacking, fraud and discrepancies in the process which should be kept in mind. Further, it is also pertinent to note that laws in India are at emerging stage, thus, before execution of any e-Agreement Technical competence and accreditation should be considered. ■

# Big Data in Machine Learning



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Machine Learning is a technique wherein a machine uses big data to learn or to explore the relationship between variable X and variable Y and using that relationship to make future predictions.

Big Data is either structured or unstructured. Structured data is data set which can be arranged in the form of rows and column and can be readily be used for data processing. On the other hand unstructured data is data mostly in text format or in a format that can not be readily be used for data processing. In real life, it is noted that only 30% of the data is structured data, and 70% of the data is unstructured data.

We will take an example to see the use of big data which can be processed to give result on which further action can be taken:

Let us first take an example by applying big data Machine learning in movie industry:

Suppose, there are three variables, namely

X1-no. of theaters movie being released,

X2-no. of superstar casting,

X3-marketing budget of the movie,

These are few variables that will influence the result variable Y which is revenue which movie will earn. Here, Y is dependent variable as it is dependent on X1, X2, X3 which are independent variables. All these variables are structured and we can get an outcome to decide or to know that how much earnings will an upcoming movie make. We can get past data mentioned above let's say we collected data of 10000 movies and came to an outcome equation say,

**Y(Movie Collection)=10Cr.+(1.8\*no. of theaters movie being released)**

**+(2.3\* no. of superstar casting)**

**+(1.1\* marketing budget of the movie)**

Let us, now also incorporate unstructured data also into the above equation. Suppose, machines are instructed and coded to convert text outcomes to numbers as machine understand numbers and cannot process inconsistent data. Thus, lets assume that all the tweets on Twitter with #moviename are studied and accordingly tweets sentiments are rated. The machine will be programmed to know that what comments are favorable and what are against. All this is say studied for 2 weeks before release of the movie and outcome is predicted before the release of the movie. Similarly, comments on movie trailer can also be studied and processed that how public react on the trailer. This will both add 2 more independent variable terms X4 and X5. So the new equation will be,

**Y(Movie Collection)=10Cr.+(1.8\*no. of theaters movie being released)**

**+(2.3\* no. of superstar casting)**

**+(1.1\* marketing budget of the movie)**

**+(0.7\*Tweets on Twitter)**

**+(0.9\*Comments on movie Trailer)**

Similarly, we can add other factors too, like, say newspaper publisher's reviews on trailer or other stars comments, etc., which need to be further quantified to be used. This all process and hard work can give us an estimate that how much movie will make before it's release. And accordingly, decisions can be taken for any upcoming movie that what correction to made or caution to be taken or even this can be monetized by the investors by selling or buying movie rights.

Now, let us take another example of banks that lend money after analyzing multiple factors of the proposed borrower. They buy data from the other companies like CIBIL score which again works on big data by considering multiple factors which are not say age of the person, how much years one is active and have credit history, does one have defaulted in the past or not, if defaulted than how many times, are there any other loans in the name of person, how much credit facility is being used, etc. which is part data which bank uses. This data is collected and analyzed by large no. of the public. And then credit score is allotted and sold to banks or other financial institutions. Apart from this data bought, banks on their own collects data from potential borrowers, like say the income of the borrower, marital status, borrower is professional or salaried or business owner, net worth of borrower, etc. Here also multiple factors are being collected and analyzed and are given points by the banker, and one threshold limit is set. If the potential borrower's points are less than say 60 points, no credit is granted to the borrower, if score is above 85 point than credit is granted with minimal in rate of interest and if score is above 60 but less than 85 than credit is granted by charging additional rate of interest. This score threshold of 60 and 80 points is being decided after collecting and analyzing large data. Say, this score of 60 or 80 is Y which is depended on multiple factors after calculating :

Factor	Range (Say)
CIBIL Score	Less than 400 = 0 400 to 600 = 5 600 to 750 = 15 750 to 800 = 25 More than 800 = 35
Salaried/Business owner/Professional	Salaried = 20 Professional = 15 Business owner = 10
Age	18 to 25 = 5 25 to 35 = 20 35 to 55 = 15 More than 55 = 10

Net Worth (Assets by Liability)	Less than 20% = 15 20% to 50% = 10 50% to 100% = 5 More than 100 % = 0
Marital Status	Married = 5 Unmarried = 2
Own or does not house	Own house = 5 Does not own house = 2

Another example of say political party. Let us assume one national candidate who is planning to participate in national election, he can not visit every district and city thus, he can take help of big data and machine learning by let say categorizing total public into different zones or clusters based of other criteria say age, caste, income group, religion belief, the voting percentage in area, etc. On processing the same it can rank the areas which he personally needs to visit and call the nearby like-minded public to that public address which will help him to easily influence the public as at that particular time he is target specific group of audience. This will increase public contact and hence increasing the winning chance of the candidate.

On similar lines, one political party hired company providing research and analytical service which bought data from social network site to study and influence the voting decision. This company also read personal chats, comments, status, etc. of the targeted group of people, which breached the privacy of the user for which social network site was heavily finned.

### Data Processing:

Data most of the times can not be directly used, it needs to be processed, and multiple models must be created and tested to process check which model is suitable for such kind of data:

**Step 1: Data Conceptualization:** Using input to get an output that can be used for the purpose, say for valuing a business

**Step 2: Data Collection:** Data can be collected internally or externally and can be structured to fit into rows and column

- **Internal Sources:** Eg. Within the organization or company
- **External Sources:** Eg. From data vendors like Social network site

**Step 3: Data Preparation and Data Wrangling**

#### 1. Data Preparation

- **Missing Value Treatment:** Checking the data, if any value is missing, either feeding that value or deleting that row.
- **Outlier Treatment:** When some value is on the extreme side, either remove that row or replace it with maximum percentile value or minimum percentile value.

#### 2. Data Wrangling

- **Extraction:** Calculating age (Today- Date of Birth)
- **Aggregation:** Total income = Salary + Other income
- **Filtration:** Removing irrelevant Rows
- **Selection:** Removing irrelevant Columns
- **Conversion:** All valuing under column must be of the same unit (Income in Rupees)
- **Scaling:** Bringing value to a manageable scale.

**Step 4: Data Explore:** Examining data distributions and relations.

- **Exploration data analysis:** Bringing the data on graphs, charts, or visualization tool
- **Features Selection:** Selecting only the relevant features for model development
- **Feature Engineering:** Creating new variables, X1, X2, X3, etc. It is also done to improve the power of the model

**Step 5: Model Training**

- **Model Selection:** Based on the size of the data set and model accuracy model is selected.
- **Divide data into Train, Validate and Test:** Different models are trained, cross validated and refined, then performance tested on the sample data
- **Class Balancing:** Before applying any data, it needs to be balanced by either random underbalanced overvalued data of random Overbalance under valuer data.
- **Model Training:** Simply, running the algorithm on training dataset.
- **Model Tuning:** It is regularizing between the bias and variance in the model by considering optimum no. of variables.
- **Performance evaluation:** Finally, performance is evaluated by setting a range that if the model gives an accuracy of say less than 60 % it is rejected and if more than 60% then it fails to leave.

### Conclusion:

As rightly said, "Data is the new oil." We know that we cannot extract oils without machinery. On Similar lines such big data cannot be manually analysed. Thus we need to teach machines how to process and analyse data. Models are made on samples and tested, and this model are then applied to big dataset to extract meaningful information. Machine learning is nowadays proliferating, and it involves multiple hands to develop one successful model. Data scientist, Data engineers, Data analyst, etc., work with one other to make a good model which makes they earn more than other.

# Artificial Intelligence and Machine learning – New Age Tools

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**A**rtificial Intelligence – in my opinion, is the simulation of human intelligence done by machines programmed by us. The machines need to learn how to determination and do some self-correction as needed along the way. Artificial Intelligence has facilitated the processing of a large amount of data and its use in the industry. The growth of the Artificial Intelligence (AI) is based on the number of tools and frameworks available to data scientists and developers.

## Artificial Intelligence Tools & Frameworks

There are some of the tools that serve as a platform for data scientists and engineers to solve real-life problems which will make the underlying architecture better and more robust. Artificial Intelligence essential for such tools arises, where humans handle the major architectural decisions leaving other optimization tasks to such tools. These tools help to development of programs to assist us in day to day life and optimize these networks. Some of the most important tools and frameworks are explain below.

- Scikit Learn. is one of the most well-known Machine Language. (ML) libraries. Scikit-learn is a more-than-adequate instrument to work with, until begin actualizing progressively complex calculations.
- Tensorflow is that compose a program in Python. It can arrange and keep running on either CPU or GPU. It utilizes an arrangement of multi-layered hubs that enables to rapidly set up, train, and send counterfeit neural systems with huge datasets.
- Theano is wonderfully folded over Keras.neural systems library working parallel with the Theano library. It was created to make actualizing profound learning models as quick and simple as feasible for innovative work. Theano separated is that it exploits the PC's GPU. This enables it to make information escalated counts up to multiple times quicker than when kept running on the CPU alone. Theano's speed makes it particularly profitable for profound learning and other computationally complex undertakings.
- Caffe is a profound learning structure made with articulation, speed, and measured quality as a top priority. It is created by the Berkeley Vision and Learning Centre (BVLIC) and by network donors. This structure is a BSD-authorized C++ library with Python Interface.
- MxNet allows for trading computation time for memory via 'forgetful back prop' which can be very useful for recurrent nets on very long sequences. It Built with scalability in mind (fairly easy-to-use support for

multi-GPU and multi-machine training), Lots of cool features, like easily writing custom layers in high-level languages. It is for an open source, community-developed framework.

- Keras is a high-level library for neural networks, using Tensor Flow or Theano as its backend. Keras is a precious stone. Also, it offers an abstract structure which can be easily converted to other frameworks, if needed for compatibility, performance or anything.

## Types of Artificial Intelligence

1. Reactive Machines. Reactive machines are the simplest level of robot.
2. Limited Memory. A limited memory machine, as the name might suggest, is able to retain some information learned from observing previous events or data.
3. Theory of Mind.
4. Self-awareness.

The goals of artificial intelligence include learning, reasoning, and perception. AI is being used across different industries including finance and healthcare.

## AI is divided broadly into three stages:

- Artificial narrow intelligence (ANI),
- Artificial general Wide intelligence (AGI) and
- Artificial super intelligence (ASI).

Narrow AI is an Artificial Intelligence System that is designed and trained for one particular task. Narrow AI is sometimes also referred to as 'Weak AI'. It is extremely good at routine jobs, both physical and cognitive. It is Narrow AI that is threatening to replace many human jobs throughout the world. Weak artificial intelligence (weak AI) is an approach to artificial intelligence research and development with the consideration that AI is and will always be a simulation of human intellectual function, and that computers can only appear to think but are not actually conscious in any sense of the word.

Wide AI is a system with cognitive abilities so that when the system is presented with an unfamiliar task, it is intelligent enough to find a solution. Here the system is capable of having intelligent behaviour across a variety of tasks. The techniques aim at replicating and outstanding many capacities of human intelligence such as risk analysis and other cognitive processes.

## Major Use Cases of Artificial Intelligence

Artificial Intelligence is used almost everywhere today, in

systems such as Mail spam filtering, Credit-Card fraud detection systems, Virtual Assistance and so on. I believe there is no end or limitation to the number of applications we have with Artificial Intelligence to make our lives better! Artificial Intelligence For Rescue Missions. We have started by developing systems which help first responders find victims of earthquakes, floods, and any other natural disasters.

Artificial intelligence has massive potential advantages. It is applied in various sector. However we will discuss only Banking related only due to space restrictions.

### **Artificial Intelligence Applications: Banking**

AI in banking is growing faster than thought! A lot of banks have already adopted AI-based systems to provide customer support, detect anomalies and credit card frauds. In fact, AI solutions are there to enhance security across a number of business sectors, including retail and finance. EVA (Electronic Virtual Assistant) can collect knowledge from thousands of sources and provide simple answers in less than 0.4 seconds. AI and Deep Learning to detect fraudulent transaction patterns and prevent card fraud for years now.

### **Step of implementation.**

- 1) Identifying the Right Bottleneck Businesses must identify processes that can be automated most efficiently. A policy is to ask- which potential process for automation can also raise the efficiency scale of other sectors? For instance, automated demand forecasting can not only improve sales but also provide expansive insights for inventory management, maintenance, and re-marketing.
- 2) Matching Problems with Appropriate Automation Techniques AI is a broad discipline encompassing machine learning, Robotic Process Automation (RPA), deep learning, Natural Language Processing (NLP), computer vision, etc. Algorithms, frameworks, tools, and tech stack used for AI applications differ significantly for different use cases. To extract optimum value by investing sufficient resources, businesses must tap into AI experts and practitioners
- 3) Channelizing Rich Data  
With the cost of prediction and sensors diminishing, the complementing cost and value of data have spiralled exponentially. Touted as ‘the new oil’, rich data is the powerhouse for every AI solution from recommendations to predictions to virtual assistants. It is, therefore, imperative for businesses to gather, utilize, and analyse their data sources to gain unparalleled insights and strengthen decisions.
- 4) Evaluating Performance and Impact  
The most crucial step is to monitor the performance of AI-driven cost reduction applications from inception to completion. This is where human expertise is required to compare model performance with set benchmarks, time frames, budgets, and objectives. This can be initiated

by tracking metrics regularly, automating reports, visualizing data, and deploying fast track applications.

### **Advantages of Artificial intelligence.**

- 1) Reduction in Human Error  
The phrase “human error” was born because humans make mistakes from time to time. Computers however, do not make these mistakes if they are programmed properly. With Artificial intelligence, the decisions are taken from the previously gathered information applying certain set of algorithms. So errors are reduced and the chance of reaching accuracy with a greater degree of precision is a possibility. ( e.g In Weather Forecasting using AI they have reduced majority of human error.)
- 2) Takes risks instead of Humans  
This is one of the biggest advantage of Artificial intelligence. We can overcome many risky limitations of human by developing an AI Robot which in turn can do the risky things for us. Let it be going to mars, defuse a bomb, explore the deepest parts of oceans, minning for coal and oil, it can be used effectively in any kinds of natural or manmade disasters.
- 3) Available 24x7  
An Average human will work for limited working hours a day considering the breaks, refreshing themselves, weekly off's etc. But using AI we can make machines work 24x7 without any breaks and they don't even get bored unlike humans. ( e.g : Educational Institutes and Helpline centers are getting many queries and issues which can be handled effectively using AI.)
- 4) Helping in Repetitive Jobs  
In our day-to-day work, we will be performing many repetitive works like sending a thanking mail, verifying certain documents for errors and many more things. Using artificial intelligence we can productively automate these everyday tasks and can even remove “boring” tasks for humans and free them up to be increasingly creative.
- 5) Digital Assistance  
Some of the highly advanced organizations use digital assistants to interact with users which saves the need of human resource. The digital assistant also used in many websites to provide things that user want. We can chat with them about what we are looking for.
- 6) Faster Decisions:  
Using AI alongside other technologies we can make machines take decisions faster than a human and carry out actions quicker. While taking a decision human will analyse many factors both emotionally and practically but AI-powered machine works on what it is programmed and delivers the results in a faster way.
- 7) New Inventions:  
AI is powering many inventions in almost every domain which will help humans solve the majority of complex problems. Example: Recently doctors are able to predict breast cancer in women at earlier stages using advanced AI-based technologies.



## Disadvantages of Artificial Intelligence

### 1. High Costs of Creation

As AI is updating every day the hardware and software need to get updated with time to meet the latest requirements. Machines need repairing and maintenance which need plenty of costs. It's creation requires huge costs as they are very complex machines.

### 2. Making Humans Lazy

AI is making humans lazy with its applications automating the majority of the work. Humans tend to get addicted to these inventions which can cause a problem to the future generations.

### 3. Unemployment:

As AI is replacing the majority of the repetitive tasks and other works with robots, human interference is becoming less which will cause a major problem in the employment standards. Every organization is looking to replace the minimum qualified individuals with AI robots which can do similar work with more efficiency.

### 4. No Emotions

There is no doubt that machines are much better when it comes to working efficiently but they cannot replace the human connection that makes the team. Machines cannot develop a bond with humans which is an essential attribute when comes to Team Management.

### 5. Lacking Out of Box Thinking

Machines can perform only those tasks which they are designed or programmed to do, anything out of that they tend to crash or give irrelevant outputs which could be a major backdrop.

## Python for Data Science

Python is one of the best type of a general purpose language, used by data scientists and developers, which makes it easy to collaborate across organization through its simple composition. Python is useful for communicate with other people. Python is open source, interpreted, high level language and provides great approach for object-oriented programming.

“Data science” is just about as broad of a term as they come. It may be easiest to describe what it is by listing its more concrete. Python is Good Enough Means Good for Data Science. Python is a multi-paradigm programming language: a sort of Swiss Army knife for the coding world. Python is Necessary in the Data Science Field. It's possible to work as a data scientist using Python. Each language has its strengths. it's possible to build data models, systematize data sets, create ML-powered algorithms, web services, and apply data mining to accomplish different tasks in a transitory period of time.

Python is widely used in scientific and numeric computing: SciPy is a collection of packages for mathematics, science, and engineering. Pandas is a data analysis and modelling library. NumPy and SciPy are expands on two essential libraries of Python. It supports many administered and

unsupervised learning calculations. Precedents incorporate direct and calculated relapses, choice trees, bunching, k-implies, etc.

It's often used as a “scripting language” for web applications. This means that it can automate specific series of tasks, making it more efficient. Consequently, Python is often used in software applications, pages within a web browser, the shells of operating systems and some games.

Python is much popular because it is highly productive as compared to other programming languages like C++ and Java. Python is also very prominent for its simple programming syntax, code readability and English-like commands that make coding in Python lot easier and efficient.

## Advantages of Python

- Easy to Read, Learn and Write. Python is a high-level programming language that has English-like syntax.
- Improved Productivity.
- Python is a very productive language.
- Interpreted Language.
- Dynamically Typed.
- Free and Open-Source.
- Vast Libraries Support.
- Portability.
- Slow Speed.

Some of the benefits of programming in Python include:

- Presence of Third Party Modules:
- Extensive Support Libraries:
- Open Source and Community Development:
- Learning Ease and Support Available:
- User-friendly Data Structures:
- Productivity and Speed:

## Machine learning

Machine Learning (ML) is a division of Artificial Intelligence. ML is a science of designing and applying algorithms that are able to learn things from past cases. ML can be applied to solve strong issues like credit card fraud detection, enable self-driving cars and face detection and recognition. ML uses complex algorithms that constantly recapitulate over large data sets, analysing the patterns in data and facilitating machines to respond different situations for which they have not been explicitly programmed. The machines learn from the history to produce reliable results. The ML algorithms use Computer Science and Statistics to predict rational outputs.

### ML has three important key capacities.

- Supervised Learning

In supervised learning, training datasets are provided to the system. Supervised learning algorithms analyse the data and produce an inferred function. The correct solution thus produced can be used for mapping new examples. Credit card fraud detection is one of the examples of Supervised Learning algorithm.

- Unsupervised Learning

Unsupervised Learning algorithms are much harder because the data to be fed is organised /uncluttered instead of datasets. Here the goal is to have the machine learn on its own without any supervision. The correct solution of any problem is not provided. The algorithm itself finds the patterns in the data. One of the examples of supervised learning is Recommendation engines which are there on all e-commerce sites or also on Facebook friend request suggestion mechanism.

- Reinforcement Learning

This type of Machine Learning algorithms allows software agents and machines to automatically determine the ideal behaviour within a specific context, to maximise its performance. Reinforcement learning is defined by characterising a learning problem and not by characterising learning methods. Any method which is well suited to solve the problem, we consider it to be the reinforcement learning method. Reinforcement learning assumes that a software agent i.e. a robot, or a computer program or a bot, connect with a dynamic environment to attain a definite goal. This technique selects the action that would give expected output efficiently and rapidly.

Artificial Intelligence and Machine Learning always interests and surprises us with their innovations. AI and ML have reached industries like Customer Service, E-commerce, Finance and where not. There are certain implications of AI and ML to incorporate data analysis like Descriptive analytics, Prescriptive analytics and Predictive analytics.

Auto ML is probably one of the strongest and a fairly recent addition to the resource of tools available at the disposal of a machine learning engineer. Optimizations are of the essence in machine learning tasks. While the benefits reaped out of them are lucrative, success in determining optimal hyper parameters. This is especially true in the black box like neural networks wherein determining things that matter becomes more and more difficult as the depth of the network increases. Thus we enter a new dominion of Meta, wherein software helps up build software. Auto ML is a library which is used by many Machine learning engineers to optimize their models.

Machine Learning is just way to achieve Artificial Intelligence.

- Deep Learning with Tensor flow and Keras

Tensor flow is popular for ease with which developers can build and deploy applications. Tensor flow can be used to achieve all of these applications. TensorFlow is an open-sourced end-to-end platform, a library for multiple machine learning tasks and most used library used in development of Deep Learning models. Tensor Flow software with the C++ programming language.

What is the relationship between Tensor Flow and keras?

Tensor Flow is an open-sourced end-to-end platform, a library for multiple machine learning tasks, while Keras is a high-level neural network library that runs on top of

Tensor Flow. Both provide high-level APIs used for easily building and training models, but Keras is more user-friendly because it's built-in Python.

Tensor flow is the most used library used in development of Deep Learning models. Keras, on the other end, is a high-level API that is built on top of Tensor Flow. It is extremely user-friendly and comparatively easier than Tensor Flow.

Hence, PyTorch is more of a pythonic framework and Tensor Flow feels like a completely new language. These differ a lot in the software fields based on the framework you use. Tensor Flow provides a way of implementing dynamic graph using a library called Tensor Flow Fold, but PyTorch has it inbuilt.

Keras is the high-level API of TensorFlow an approachable, highly-productive interface for solving machine learning problems, with a focus on modern deep learning. It provides essential abstractions and building blocks for developing and shipping machine learning solutions with high iteration velocity.

Google built the Tensor Flow software with the C++ programming language. But in developing applications for this AI engine, coders can use either C++ or Python, the most popular language among deep learning researchers.

Deep Learning is just way to achieve Artificial Intelligence. Artificial Intelligence & Machine Learning – Impact on Human Life

Artificial intelligence forms the basis for all computer learning and is the future of all complex decision making. Some of the highly advanced organizations use digital assistants to interact with users which saves the need of human resource. The digital assistant also used in many websites to provide things that user want. AI is making humans lazy with its applications automating the majority of the work. As AI is replacing the majority of the repetitive tasks and other works with robots, human interference is becoming less which will cause a major problem in the employment standards. Every organization is looking to replace the minimum qualified individuals with AI robots which can do similar work with more efficiency. There is no doubt that machines are much better when it comes to working efficiently but they cannot replace the human connection that makes the team. Machines cannot develop a bond with humans which is an essential attribute when comes to Team Management. Machines can perform only those tasks which they are designed or programmed to do, anything out of that they tend to crash or give irrelevant outputs which could be a major backdrop. As an example, most humans can figure out how to not lose at tic-tac-toe (noughts and crosses).

Positive & Negative Effects of Artificial Intelligence. If we utilize AI with care we can improve these outcomes, including those related to diversity and inclusion. However, if AI is used casually, this can undermine its benefits and limit success for our people and the organization as a whole.

Through AI, technology is making life easier. Machine learning is being used to learn human behaviour so that apps can predict what you might want and at what time. In

this way, some activities like ordering groceries, watching movies, listening to music, and more are done for you by their respective apps.

According to a report on the Future of Jobs by World Economic Forum, AI will create 58 million new artificial intelligence jobs by 2022. There is an excellent chance that by 2030 AI will outperform humans in most of the mental tasks but that does not mean it will take away jobs.

### AI & ML – use as Audit Tool

Machine learning algorithms can provide firms with opportunities to review an entire population for anomalies. When audit teams can work on the entire data population, they can perform their tests in a more directed and intentional manner. We recently implemented AI for auditing. This software platform uses AI and various control points (benchmarks) to analyse the transactions in the general ledger and then puts those transactions into buckets: high risk, medium risk, or low risk.

AI provides many benefits for internal auditing that include improving workflow and efficiency and minimizing risk and harm by identifying them sooner. AI can help auditors and financial professionals by taking care of tedious and time consuming tasks, thus saving time and increasing productivity and efficiency.

Machine Learning (ML) is the use of statistical techniques to enable computers to “learn” with data without being explicitly programmed. ML can detect patterns or apply known rules to predict outcomes, detect anomalies and yield insights.

Rather than relying primarily on representative sampling techniques, machine learning algorithms can provide firms with opportunities to review an entire population for anomalies. When audit teams can work on the entire data population, they can perform their tests in a more directed and intentional manner.

AI enables the analysis of a full population of data and can identify outliers or exceptions. By making it possible for auditors to work better and smarter, AI will help them to optimize their time, enabling them to use their human judgment to analyse a broader and deeper set of data and documents.

While AI presents businesses with significant opportunities to enhance their operations, its capabilities are just as attractive to cyber criminals. AI and machine learning will improve the ability and increase the speed with which hackers can find weaknesses within networks.

AI will perform repetitive tasks, provide greater insights and improve efficiencies and quality, allowing auditors to better use their skills, knowledge and professional judgment.

Some factors support AI to be a boon as well as a bane. Factors that support AI to be a Boon: Ease in Availability: Machines do not require refreshment like humans and can work for a longer period. They are capable of performing tasks and work continuously and produce quality output.

The AI we use is machine learning where the machine has built-in. We think AI is a great tool for controllers and

internal audit departments.

- **AI & ML – Tool for Cost Control & Cost Reduction**

Reduce Costs and Improve Efficiency with Investing in AI Intelligence is helpful for businesses to identify targeted customers proactively. Through actionable sales intelligence, businesses can better analyse a particular buyer purchase behaviour. Applying artificial intelligence to current business can be very cost-efficient.

The price depends on the size of the company and many other factors as well. AI can be very helpful in improving the data analysing speed and also to increase the reporting time. The data are analysed more accurately and the reporting time is also increased. AI can be used to analyse large amounts of data to draw conclusive reports.

### Reduce Overhead Expenses

- Automation and optimizations using AI are possible in many spheres of business, and production output is one of them. AI can help for automate certain manufacturing processes. In this way improve the efficiency of the manufacture, increase the production output and reduce costs on dealing with human mistakes.
- Human Resource Cost Reduction: Human resources costs are the top ticket items in technology or IP-based businesses. AI/ML can save people cost in several ways to improve productivity and cut waste. Reducing routine, repetitive tasks are the low-hanging fruit.
- Procurement Cost Reduction: Procurement in any business presents a massive opportunity to save cost if they have the right insights to find the suitable vendor at a reasonable cost. Every organization has a tremendous amount of past procurement data, which is pretty much left as untouched dark data. Analysing these data will give insights and strategies on vendors' past performance, price points, competitor analysis, and negotiation opportunities.
- AI-powered OCR for Eliminating Data Entry Costs
- Optical Character Recognition (OCR) With AI-OCR, businesses can now automate eKYC, purchase order and receipt digitization, digital on boarding, and other labour-intensive functions.
- Reduce Operating Costs and Improve Efficiency Using AI. AI technology can increase the productivity of the business.

### Summary:

These are some advantages and disadvantages of Artificial Intelligence. Every new invention or revolution will have both, but we as humans need to take care of that and use the positive sides of the invention to create a better world. Clearly, artificial intelligence has massive potential advantages. Some people also say that Artificial intelligence can destroy human civilization if it goes into wrong hands. But still, none of the AI application made at that scale that can destroy or dominate humanity. ■

# Artificial Intelligence



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Artificial Intelligence (AI) is simulation of human intelligence in machines those are programmed to think like humans and copy their actions.

Machine Learning (ML) refers to the concept of computer programs which can automatically learn from and adapt to new data without being assisted by humans. It is part of artificial intelligence only.

Artificial Intelligence is the combination of Machine Learning Techniques and Deep Learning.

## Some of the Artificial Intelligence (AI) Applications are:

- AI in E-Commerce
- AI in Navigation
- AI in Human Resource
- AI in Healthcare
- AI in Gaming
- AI in Automobiles
- AI in Social Media
- AI in Marketing

### AI in E-Commerce:

E-Commerce uses AI via searching activity of customers and makes suggestions to customers according to their preferences, interests and based on their browsing history.

### AI in Navigation:

Navigation uses it to guide different lanes, roads via GPS application, like Google Maps, to its clients to reach at specific place.

### AI in Human Resources:

Companies are using Artificial Intelligence applications to hire human resource. AI helps in shortlisting candidates based on criteria feeded in the application. Also it can be used in online written examination during hiring process to check the answers and give marking accordingly.

### AI in Healthcare:

In healthcare sector, AI helps in hospitals in installing giant machines which diagnosis diseases as well as used

in laboratories for detecting human body interruptions via blood tests and other tests.

### AI in Gaming:

It is used in gaming to take decisions in critical situation like In Cricket and other games it works as third empire or third person who gives its opinion about player's position in particular stroke.

### AI in Automobiles:

Digital Metres in Vehicles are best illustration of Artificial Intelligence in automobiles. It informs owner about riding kilometres, petrol indicators, service due indicators.

### AI in Social Media:

Social Media platforms like Facebook, Twitter, Instagram uses AI to attract and acknowledge their users about their interests, fields and choices.

### AI in Marketing:

AI helps in marketing field to research the product market for different categories like segment-wise areas for advertisement. It also helps to prepare customer base as per their status and according to it companies can approach their customers.

Artificial Intelligence, Machine Learning and Cost Management:

Artificial Intelligence in Cost Management has two prerequisites:

### 1. Standardization and 2. Digitization.

In costing, Artificial Intelligence and Machine Learning can be used effectively, once standard is fixed and digitization is implemented. For example, to produce one unit of product, we have to fix raw material quantity for particular process and same have to feed in digital metre of machine. Once it is done, then every time machine itself calculates units of raw material for that process and indicate time to time to us. In a same way, in the system once we feed data of standard requirement, computer auto calculates for different process as well as show how much quantity we have and in next what time period, we need the material. Thus, Inventory Management has been become possible through AI and ML which ultimately leads us to cost management. ■

# CFO Speaks

**CMA Uttam R. Bhandari**

*Interview by  
CMA Malhar Dalwadi*



*CMA Uttam R Bhandari is presently associated with VPJ Group of Companies since Sept 2006 and holding position as Associated Vice President (Finance and Accounts). Currently responsible for entire Accounts, Finance, Costing, budgeting and Commercial dep't. He holds graduate and master degree in commerce. He is fellow member of ICAI. He has 30 years of rich experience mainly in Accounts, Finance, Budgeting, Forex, Indirect Taxation and Costing also and during whole journey of experience he worked mainly in manufacturing industries. However during period of Sept 2014 to Dec 2015 he was designated as CEO of Zuri Group of Companies based at NAIROBI (KENYA) and responsible for entire operation of ZURI in KENYA. Prior to joining VPJ Group he also worked in two multinational Company called Bisazza India Limited and Pall Pharmalab Filtration Pvt Ltd. He was also designated as Finance Director along with Chief accounts manager during job with BISAZZA.*

## 1. What do you feel about your role as CFO of mid-size company?

Being a CFO of mid size Company, you have to be very much cautious and equipped with requirement of compliances whether legal and or statutory. Role of CFO is always very challenging as he has to plan strategic and influence the Company's future direction. Being working with ceramic industries there are lot of confronts for cut through competition with domestic and global market concerning price as well as quality and most important challenge was well managing of finance being Ceramic industries mostly known as capital extensive and has to provide financial leadership and align finance with the business to facilitate Company growth. Though I really enjoyed working with Company on all fronts whether finance, banking, costing or indirect taxation and act as steward by protecting Company assets and communicated risk and reward with Board Members.

## 2. What inspire you to pursuing CMA qualification?

Being accounting matter is mostly look after by Chartered Accountant so it is inspired me to learn and focus more on finance, costing, budgeting and indirect taxation, where I got opportunity and proved it. CMA profession also helps in managing and performing all these function. Not only this, CMA profession also assist Company in taking various decisions like make or buy of product, helps in marginal costing,

## 3. How the CMA qualification helps you in your career path?

CMA qualification helps me to take appropriate and timely action for budgeting, commercial, banking, product costing and commercial matter and to acquaint management time to time for further decision. It also helps in implementation of pricing strategy, new software for our Industry. CMA also assists me by using various technique and tool for product costing enable to decide for make or buy product. Finally it also supports to develop my own career in Industry.

## 4. How would you evaluate the role of CMA in manufacturing industry?

In the manufacturing industry most of organization requires correct cost analysis and better pricing of product in competitive environment to sustain in the market. Here role of CMA is very important and he is in better position to justify the role and provide the cost competitive data to improve better product efficiency which give ultimate result for success of Company.

## 5. How a CMA can helpful to industry in Cost Control and Cost Saving, especially manufacturing industry?

CMA Can play a vital role in providing data pertaining to batch wise pr product wise which is basic requirement for any manufacturing industry for better cost control and cost saving. Further cost audit is a process which helps Company to verify the correctness of data and can detect any error or mistake occurred. CMA with knowledge of costing would definitely help organization for cost saving and control by reducing wastage and improving productivity.

**6. How a CMA's role is important for management under COVID situation to improve productive and profitability?**

In the Covid pandemic situation survival is very much important for any organization. The Company has to counter known and unknown cost with available resources by following regulatory guidelines and requirement. Person like CMA having sound knowledge can provide innovative ideas and gives solution to overcome this situation with better ideas to control cost and manage the situation in sophisticated manner by focusing on each element of cost with associated risk and maximum productivity with limited resources. During this tough time, an Organization has to keep their customer along with supplier happy with their need like maintaining supplies as well as finance commitment. CMA with his expertise can evaluate a tool mechanism and financial analyse with support of existing resources to overcome the time gap being caused due to COVID.

**7. What are your views about statutory cost records maintenance and cost audit?**

Being CMA I believe that every organization should maintain cost accounts records which will depict correct picture of pricing of each product for each division or department. By doing this exercise even organization can detect loss making product. This will also help in calculation of correct cost of production and cost of sales. By maintaining cost records, Company would be in position to have better control of their operation which also has financial impact. Cost audit is process which assist Company to verify the correctness of their cost records.

**8. Is the Cost Audit creates value addition for industry?**

Like every audit has its own pros and cons, similarly cost audit also has its own benefit which creates value addition for any Industry. In the process of Cost audit, by doing reconciliation of cost data with financial data, CMA can advise for corrective action for adverse impending situation well within time enable organization to take remedial action to protect the interest of Industry.

**9. How the performance appraisal report by cost auditor which is laid down in earlier rules 2011 will be useful to industry?**

Performance appraisal reports evaluate and identify the deviation from standards highlighting losses and wastage along with inefficiency in cost and also indicate financial impact enable Company to take corrective decision ultimately add values to the Company.

**10. Your message to young CMAs.**

For CMA candidate, other than costing, there are many fields available where CMA can build up his / her career like finance, budgeting, indirect taxation, treasury, insurance,

Assets Management, tax law, valuation etc but has to select areas which is of their interest and passion. Even CMA has large scope in the industry for job and with perception can start professional practise also. Let CMA know his or her potential and accordingly move with confidently as doors are open in world.

## OBITUARY



CMA V. Kalyanaraman, Former President ICAI (1974-75) and SAFA passed away on 5th June 2021.



CMA M. R. Dudani, (M/ 3738) Founder Member, of Kalyan-Ambernath Chapter and Past Chairman of Chapter for 1977-78, 1991-92, 1993-94, 2016-17 and 2019-20 passed away on 31st May 2021.



CMA M. K. Narayanaswamy (M/4626) Senior Member of the Institute, Management Committee Member and Past Vice Chairman of Navi Mumbai Chapter passed away on 31st May 2021.

*May the departed souls rest in peace*

# Management Wisdom

## Article 6: Succession Planning for the IR (ER) Executives (EP = EC × ER)



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Although ‘Succession Planning’ has been a serious matter of discussion in almost all the organizations, it has not been viewed with rigor while applying it to the ER (IR) executives. For the recent two decades of business globalisation, ER took a back seat as many corporate CEOs conveniently or ignorantly took it as a robotic matter of ‘ease of doing business’ and bothered only about the ‘labour laws & compliances’. CEOs were not reasonably advised and alerted by their CHROs that ER is much more than the labour laws & legal compliances. ER is more about engaging employees in a collective, transparent and disciplined process of ‘creating value’ for all the stakeholders. Therefore, ER refers to institutionalisation of entrepreneurship across the organisation, at all the levels of employment. It is also about excelling higher and higher on the newly found benchmarks of ‘human productivity’. Naturally it has to deal with the ‘employability’ of the workers in a vibrant business scenario. Union leaders and the leaders of management need to work together as ‘business partners’ attaching equal weightage to capital, ideas, labour and technology. While doing so ‘no ism’ of left and right should hinder us.

In this context of ‘labour’ being a very important component of ‘facilitation of value creation’, the executives taking care of employee relations, competence, compensation, satisfaction & productivity are to be groomed and succeeded as the “champions of operational human capital management”. Pre - Covid, there were many serious instances of the unhappy labourers rebelling aggressively and very often illogically. This was mostly a result of the loss of connect between the shop floor culture and organization’s ethos. It was also a result of lack of a genuine ratio between executive pay and worker pay in many cases. One may argue here with a simple capitalist or entrepreneurial statement that “compensation is decided by the criticality of a skill set”. This is partially true but there are also many instances of executives getting bigger pay - packages disproportionate to the value created by them. The local social environment too influences ‘employee compensation vis a vis employee productivity’. Days are gone when different plants used to have different designs of LTS and unions would accept them obediently.

The succession planning for the ER - executives should be based on the “four levels of leadership” required at the plants or activity centres. These four levels are - basic, supervisory, managerial and strategic. In terms of hierarchy and age profile, the basic leadership is of the officers on the shop floor, in the midst of workers (officers of 23 to 26 years of

age). Managers should provide the ‘supervisory leadership’ (from an age 26 to 32). Senior managers going up to the level of DGM should perform as ‘managerial leadership’ (from an age 32 to 40). Strategic leadership of the ER - executives should be in the fourth band starting from a GM and growing up to a position on the Board. Very lately we find that a senior vice president after being exposed to the corporate proceedings, finds a place as an ‘executive director’.

Basic leadership by an officer on the shop floor should carry out four major tasks - 1. operational conduct of ER 2. execution of ER - related compliances 3. connecting individual & group productivity with employee competence and satisfaction and 4. statistical documentation of routine and exceptional cases of output and the corresponding elements. Such a robust statistical analysis should be based on the definition of ‘complete productivity’ which should have six important components - volume, cost, quality, time, safety and customer delight. The sixth component refers to the vibrancy in the market and the readiness of workers to improvise or change accordingly. Like the officers from the other functions, the ER officer should be shown his career path, relevant opportunities of competence development and career - related challenges. His or her parallel progress as a ‘corporate citizen’ should continue so that he/she becomes a ‘complete manager’.

The second step of career succession is of ‘supervisory leadership’ which should broadly comprise of 1. supervising the conduct of ER in a defined ‘process vertical’ 2. Balancing between the ER - commitment of the management and target completion from the workers. 3. Gathering and assessing the short-term and long-term impact of the LTS and ER - initiatives on shop floor work culture and 4. periodic measurement of individual and group productivity for various purposes. “Super + Vision” is a perfect definition of this leadership. He or she will have to be trained about all the technical and behavioural aspects of supervision. This leader should also have the skills of interacting with the council members of the union and bright opinion - maker employees who influence through ‘small business activity groups’.

The third level of ER - leadership may be called the “managerial leadership” which is a very important connect between the management and the employee’s union. This leadership should execute five critical tasks as follows: -

1. Benchmarking and analysing the employee performance compared with industry best and the close competitor.

- Analysing the 'value - created' by machines and employees for various purposes of process excellence, productivity enhancement, capex provisioning for new technology and optimization of labour force etc.
- Output / Input Analysis using various quantitative & qualitative parameters with special reference to a ratio between 'employee cost' and 'cost of value-add'.
- Designing and executing innovative initiatives of 'employee engagement', defining and deciding 'employee separation' & redeployment of the workforce
- Assisting the strategic leader in creating an equilibrium between legality & legitimacy of the compliances, compensation and initiatives related to the workforce.

The highest level of ER leadership is "strategic". The leader should closely work with the CHRO, COO and CEO. His leadership is expected

- To establish a strategic equilibrium of ER, EC (Employee Compensation) & EP (Employee Productivity). It has to be = ER × EC = EP.

- To promote constant innovation & benchmarking in all the three areas viz ER, EC & EP.
- Strategic Wage Management during different milestones of company's life-cycle
- To establish and maintain a meaningful connect between company's ethos and ER - Policy & to take care of the vibrancy in manpower planning as a result of alterations in the business model and value chain.

The strategic head of ER should always evaluate his "ER - Model" raising four pertinent questions –

- Is it strategically sustainable?
- Is it technically sound?
- Is it culturally vibrant?
- Is it socially relevant?

Of course, a suitable organisational mechanism should be built up to take care of the systematic succession planning of "ER - Leadership".

## WIRC BULLETIN ADVERTISEMENT TARIFF

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3	25,000	12,500	12,500	7,000	7,000	3,500
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*May this chapter of your life be full of wonderful surprises...Wishing you a life full of success and happiness.....*

**Happy Retirement!!!**



# Virtual CFO Services (vCFO)

## Article 5: How to provide the vCFO services in Large Organizations and MSMEs

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Services of vCFO are needed in all sectors and all types of organizations. In this article we will see the strategies for providing vCFO services in organizations which differs in size. As the title suggest Large Organizations does not mean too large organizations but fairly large organizations which are not falling under MSMEs. Companies availing vCFO services in large organizations mainly falls in Technological Companies whose management is mainly of technocrats and they would like to deal with person having similar mind-set and still have excellent knowledge about Finance and related matters. Here in these organizations mainly corporate strategies should work besides day to day businesses. On the other hand MSEM has different needs who are mainly concentrating on daily needs of finance like Working Capital Management, People Management etc. Here corporate strategies work less but business strategies and allied strategies have more relevance. In larger organizations companies prefer to have Part Time vCFO services whereas in MSME they need Full Time attention to the services. Larger organizations also see a stop gap arrangement as they need time to find right person whereas in small organizations complete attention is critical. Once we understand salient features of MSME and Large Organizations which are not MSME it is easier to provide services to them.

Following are some Salient Features of MSME and Large Organizations, once we understand the needs of both types of organizations, providing services becomes easier. I have tried to compile their features and strategies for providing vCFO services to them in each point below:

1. Set Process and need to set the processes: The difference between MSME and Large Organizations is on the processes. In the Large organizations mainly processes are defined and also standard operating processes are in place and followed too. In case of MSME and that too start-ups all type of processes are yet to be set up. Like Purchase is a process, booking of sales invoices is also a process etc. vCFO is expected to bring his expertise in the organizations as and when needed. In larger organizations, mainly overseeing the set processes is critical where as in

MSEM sometimes drawing those processes is also challenging.

2. Stop Gap Arrangement or Full time services: As mentioned above any of the large organizations prefer vCFO services because the current CFO leaves abruptly and then stop Gap arrangements are needed. Here for vCFO support of One or Two Key staff in Finance is available but in case of MSMEs vCFO has to develop such key personnel among given manpower resources.
3. Process Driven and Mentorship: In MSMEs vCFO is supposed to actually do mentorship of Management. They need someone who can guide them and act like a coach for any sports. MSME faces lots of issues at business level like Sales Management, Personnel Strategies/ Management etc. vCFO is expected to resolve those issues and set up the practices for future. Whereas in larger organizations processes are set but there is someone needed to vouch the processes and suggest improvement or give assurance that processes are going on smoothly.
4. Business Strategies and Corporate Strategies: I think this is the place where professionals feel the difference. In large organizations their main need is to talk about corporate strategies like Merger, Acquisitions, Sales Portfolio, Investment decisions etc. Companies approach for vCFO services when they have fair experience of doing business but somehow growth strategies does not work. In such typical environment, even vCFO is appointed as Consultant or heading 'Office of Strategy' etc. and sometimes act like Group CFO also. In case of MSME/ Start-ups the real skill is on day to day basis ensuring to set business processes. Even Functional Strategies needs to be set up by vCFO. Both type of services are challenging and needs efforts of not only one person but a team built up at the end of vCFO. While providing services in organizations vCFO has to understand the needs of business with respect to strategies they are looking into.
5. Technology Usage: As we all know that MSME uses lesser effective technology as compared to Large

Organizations. Business functions are to be performed usually by personnel with the help of technology however vCFO has to cope with lesser effective technology by smaller organizations and that is the place vCFO needs to give his expertise for technology improvements. Where as in larger organizations uses all types of technologies including ERPs well aligned with other process software. vCFO accepting assignment in larger organizations needs to be technology sound besides his expertise in Business and Corporate Strategies. Sometime it is difficult to adjust with latest technology hence learning aptitude is also important skill for vCFO.

6. **Cash Flow Issues:** The main reason MSME now a days appoint vCFO is negative or reducing cash flow. CMA Professional accepting the assignment has to first face this challenge whereas in Larger Organizations usually Cash Flow issues either not in existence/ temporary existence or has lesser problems with the same. While accepting the assignment it is expected to have prior information with cash flow of the company. Of-course there are vice a versa situations also like MSME flooded with cash or Large Company is cash empty alike. vCFO while accessing MSME or large company has to consider cash flow condition of the company as well.
7. **In-House Team:** While working with Large Organizations as vCFO usually In house team is well trained and helps in achieving the results. Where as in MSMEs/ Start Ups vCFO has to use his office extensively. The support needed from other team members of vCFO is totally different. In case of MSME the transactional support is needed where as in case of larger organizations strategic support and data collection may be needed. vCFO must develop a team at his end to give effective services as per needs of the client.
8. **Budget/ Planning and Fire Fighting:** Larger organization especially where cash flow is not a problem, vCFO can concentrate on Budget and Planning. CMAs are better equipped with planning and budgeting. Where as in MSME there can be situation of Fire Fighting for cash, profits,

taxations, compliance and many. Of-course as per the needs and agreed terms of vCFO contract services should be provided. Smaller companies prefer vCFO as they do not want to that daily work of finance and hence in any case vCFO should realize the needs of organization. There are few professionals who are expert in matter like Tax, Audit, Working Capital and its finance etc. for them it is beneficial and to accept such assignment which has above characteristics.

9. **Assignment Duration:** Duration of assignment is generally depends upon needs of the organization. As mentioned above if the vCFO is appointed as time gap arrangement then tenure ends typically in maximum 6 months. Where as in MSME duration may get extended upto 36-42 months as well depending upon performance. However I am insisting right from first article in the series that such assignment should be for limited period and you should get elevated to Consultant or Independent Director after the assignment is completed.
10. **vCFO Team:** vCFO services are usually given in team and in case of Small Businesses expertise of vCFO team are different than services given in Large Organizations. MSME has unique needs which range from process setting to daily book keeping as well. As per needs of the organization vCFO has to build a team. MSME team includes accountants, tax experts, secretarial support etc. but in larger organizations support may be needed with industry expert wherein company is having its presence. E.g. Pharmaceutical companies have different needs than what a steel company or service company. Mergers and acquisitions may be common in once sector where as in another sector has uniqueness of backward integration. vCFO while giving services to multiple client also has to build his team accordingly and pull the resources to its optimum.

I hope that we will be able to give better services when we realize the difference between applying strategies for Large Organizations and MSME's. ■

## Congratulations!!!



**CMA Shripad Bedarkar** has been elected as Vice President of Maharashtra Tax Practitioners' Association (MTPA) (Formerly called as The Western Maharashtra Tax Practitioners Association) for the year 2021-22.

Association is having 1500+ members from Western Maharashtra & now widely spreading all over Maharashtra. Association is instrumental in various representation regarding tax matters to the top most level of Government (Union Finance Ministry), updating tax professionals by arranging seminars & national conferences.

# GST Audit mechanism – Need for restructuring

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We are nearing completion of 4 years of implementing Goods and Service Tax Act, 2017. It was said to be Good and Simple tax but has landed into a lot of harassment and confusion.

It was thought to be a structured law but landed into a law implemented through no. of notifications, circulars and Advance Ruling decisions from various Central/State level authorities. To add to all this there are confusions under returns like ITC as per GSTR2A and GSTR2B. Clause 16(2)(aa) of CGST Act, 2017 still not notified implementing GSTR2B and notices to Tax payers have already started. Stringent compliance of E-way bill where penalty is twice the tax which is just unjustified. Tax payers are all in confused and many times under terrified state of affairs. Search and Seizures to unearth fake billing is an additional harassment to a normal law abiding businessman.

Audit under section 65 of CGST Act, 2017 has to be conducted by departmental authorities. Many Tax payers have got notices calling for information for audit but only a small percentage of actual audit has started. There is no time limit for the department to carry out the audit for a particular year, for example audit for 17-18 should be completed in 2020-21. Further, section 59 of CGST Act, 2017 talks about self-assessment by the Taxable person. Therefore, the Tax payer is all exposed to a risk of errors, omissions and even non-willful mistakes under the new law. Everything is getting delayed and most probably a tax payer will come to know of any error or short comings which may be innocent ones, only after lapse of 3-5 years and the Department will jolly well jump on with invoking provisions of section 74 of CGST Act with 100% penalty and 18/24% interest. Just imagine the plight of a Tax payer having made some error in 2017 of say Rs, 100 short payment of tax, will land up paying 72% interest (18x4 yrs) and 100% penalty. Is this justified is a big question and needs to pass the taste of Equity and Justice.

The latest blow is removal of section 35(5) of CGST Act, 2017 thereby eliminating annual audit by Chartered accountant/ Cost Accountant. Equally section 44 is amended to make the Reconciliation statement self-certified by the Tax payer. The simple reason is “ease of doing business”. In fact self-certification will invite lot of issues to tax payer in future. The audit or certification of reconciliation statement by CA/CMA was a prudent situation which will warn the Tax payers of his tax obligations, legitimate benefits and will not expose to adverse tax notices, litigation etc.

Let us examine whether GSTR 9 gives proper details as Annual return? Tax payers found it difficult to compile data and were unable to file this return. Government had to come up with relaxations under notification no. 56/2019 CT dated 14.11.2019 by making certain tables optional both in GSTR9 and GSTR9C. Important is that HSN wise summary is made optional. Why Tax payers were not able to fill these details? The fact is that the format was impractical and even if there is difference in decimal, the system would not accept. Table 8 talked about ITC as per GSTR2A compared with GSTR3B. One must know that GSTR2A is dynamic and GSTR3B is static. How, this can match. Due to this issue the department has come up with GSTR2B which will be static for a particular month. This should have been thought earlier. There are limited lines indicating reconciliation of

Turnover as per audited books and GST returns. This limits the scope of reporting as businesses have variety of features.

Further, in case of multiple registration, the audit has to be done for each location separately and there is no place for reconciliation for the company as a whole.

Tax Audit under the Income Tax Act, 1961 is an audit of books of accounts with reference to Income tax provisions. Similarly GST Audit is also audit of books of accounts in relation to provisions of GST Act, 2017. For example, Para19 of Form 3CD under Income tax Act talks about reporting disallowances under section 32-35 of Income tax Act. Similarly disallowances u/s. 40 (a) are to be reported. In case of GST audit, the format can include following specific points.

- 1) Reconciliation of Turnover of outward supply with books of accounts for each item of Revenue and income reported in financial accounts.
- 2) Break up of ITC under each head of expense account including major raw material and Capital goods.
- 3) Reconciliation of ITC as per books and GSTR 2B.
- 4) Ratio of ITC to outward tax liability.
- 5) Production, dispatch and stock summary for each registration. In case of Traders it can be Purchase instead of production.
- 6) HSN wise summary of outward supply with details of notifications for rate purposes.
- 7) Calculations under rule 42/43 of CGST Rules in relation to reversal of ITC for exempt outward supply and capital goods.
- 8) Disallowances under each clause of section 17(5) of CGST Act, 2017
- 9) Gross profit to turnover ratio of last 3 years.
- 10) Analysis of Refunds claimed and ITC reversed in liability ledger

There can be many more paras which can be added looking to GST Act and Rules as amended from time to time.

This will call for a structured approach and both Government and Tax payers will be happy to comply the provisions of law.

To conclude :

- 1) GST Audit by the Department under section 65 of the GST Act, 2017 must have time limit to complete by the department.
- 2) There must be Annual assessment instead of audit as is the case under Income tax Act, 1961. Even in case of VAT laws there was a concept of Annual assessment with a limit of 2-3 years from end of financial year.
- 3) Tax audit under the Income tax Act and GST Audit under the GST Act must be combined and can be conducted by CA/CMA in whole time practice. This will avoid lot of duplication of data generation and will provide a “Wholesome” approach to audit. The Finance ministry has already started linking information between Income tax and GST. This will be a dynamic step towards unification of Direct and indirect taxation and will avoid tax evasion to a greater extent.
- 4) GST annual return and reconciliation statement must be combined if it is to be Self Certified. The format needs to be restructured and simplified. ■



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## Brunt of Covid 19 on Revenue Recognition

### Abstract:

The COVID-19 pandemic crisis and its economic effects mean that investors and other stakeholders need high-quality financial information more than ever. The financial reporting requirements that need to be considered while addressing the financial effects of COVID-19 while preparing financial statements are discussed in this paper especially the effects on Revenue Recognition as per Ind As 115. Due to the changes in the economic environment, customers will look out to modify their contracts. The ability of customers to pay for goods may be questioned prior to delivery.

The entity may choose to transact in this situation irrespective of the uncertainty. Both trade receivables and contract assets may also be subject to additional credit risk. The honoured contracts may become loss-making contracts either due to a decrease in variable consideration or an increase in contract costs. This paper aims to find out the various processes and procedures to be considered at the time of assessing the revenue recognition as per Ind As 115 and accounting standard 9. The management should consider the factors such as contract enforceability, collectability, contract modification, variable consideration, implied performance obligation and recognition of revenue while preparing the financial reports.

**Key words:** Covid19, Revenue recognition, variable considerations, company's estimate

### Introduction:

The term 'pandemic' means the spreading of the virus across all the nation of the world. This current situation has its roots in the year 2019 which impacted each and every sector of the economy. It has not only affected the mass population on a global scale but has also shown rapid retaliation against the global financial system.

The aftermath of this pandemic may vary from nation to nation, industry to industry and the top of it, enterprise to enterprise. It has become very difficult to state how and in what capacity every industry of the economic backdrop will be impacted. Looking at the spread of COVID-19, there is a temporary suspension of business operations which will ultimately result in a decline in demand and supply. As a result, the revenue numbers will drop down and the economic activity of the nation will come to a halt.

The COVID-19 pandemic crisis and its economic effects mean that investors and other stakeholders need high-quality financial information more than ever.

As a result of business disruptions associated with the

COVID-19 pandemic, an entity may be prevented from entering into customer agreements through its normal business practices, which may make the determination of whether it has enforceable rights and obligations challenging. In addition, because many of its customers are experiencing financial difficulties and liquidity issues, an entity may need to develop additional procedures to properly assess the collectability of its customer arrangements and consider changes in estimates related to variable consideration. Amid COVID 19 Various accountancy firms, regulators, and others have quickly made available advice and guidance on the accounting and financial reporting requirements that will need to be considered in addressing the financial effects of COVID-19 when preparing financial statements

### Accounting implications due to coronavirus:

The impact of the new coronavirus ('COVID-19' or 'the virus') on the financial statements for periods ending after 31 March 2021 of entities whose business is affected by the virus. There are broad IFRS implications, including:

- Non-financial assets;
- Financial instruments and leases;
- Revenue recognition;
- Non-financial obligations;
- Going concern;
- Disclosures: and
- Interim financial statements

The administration should carefully consider the effects of the COVID-19 on both interim and annual financial reports. The impact could be noteworthy for many businesses. The implications for financial reports include not only the measurement of assets and liabilities but also disclosure and entity's capability to continue as a going concern. The implications of Covid-19 should be considered by all entities including the indirect effects from lower economic activity,.

Among these we are going to discuss about the Impacts of Covid 19 on Revenue Recognition.

Under both Ind AS 115 Revenue from Contracts with Customers and AS 9 Revenue Recognition as also AS 7 Construction Contracts, the amount of revenue recognized and the way of revenue recognition may get affected by COVID-19. With the possibility of lower economic activity and reduced cash flows, several unusual changes are expected in the pattern of customer or public spending.

This is expected to be more on necessities compared to other goods and services.

Entities may have to account for returns and refunds towards the customers. For example, a consumer durable product company may have flexible return policies and customers may be stocking up such products. These unused products may be returned by the customer due to Instability. Even the airlines and event organizers have to provide refunds for cancelled flights and events.

For engineering and construction companies who follow percentage of completion method for revenue recognition, the pattern and method of revenue recognition may change for delays occurred due to lockdown in delivering their services. Further contract costs recovery of which may not be possible, are recognized as an expense immediately and cannot be considered to be part of contract cost for the purpose of percentage of completion.

Entities in the most impacted sectors may consider renegotiating their existing contracts with their customers with respect to pricing of the contract, delivery schedule of the goods and logistics costs in the current scenario. Appropriate accounting or disclosures need to be ensured by the administration based on the information available till the date of approval of financial statements by the Board of Directors.

There can be major changes in the way certain industries earn revenue. There can be production in bulk and sale of medical equipment and accessories such as masks, ventilators, medicines etc. to the government hospitals instead of private hospitals/ clinics. Another example of major change could be of the Hospitality sector that might convert its accommodation facilities into COVID19 centers for patients and medical staff hence causing an entire shift in their customer base. These disruptions could result into innovative ideas for new streams of revenue as the organisations attempt to survive in the COVID 19 situation.

This is likely to pose new industry- specific challenges to determine the timing and amount of revenue recognition including presentation issues or whether revenue should be recognised at all.

For example, companies may need to consider the following.

1. Customers may now struggle to meet their contractual liabilities. Does this mean that companies should stop recognising revenue for existing contracts and new contracts?
2. Rights to payment for performance to date may not be enforceable. Does this affect whether revenue can be recognised over time?
3. Companies and their customers may seek to change the terms of existing contracts to respond to the impacts of the COVID-19 outbreak on their business. How should companies include these contract modifications in financial statements?

Determining whether rights and obligations are enforceable may require significant judgement and regular reassessment. As circumstances continue to change,

companies should monitor the enforceability of their contract terms closely.

Ind AS 115 Revenue from Contracts with Customers requires cautious consideration of price concessions, collectability, variable considerations, and stand-alone selling prices. Entities may also need to consider how changes in their traditional business practices affect their assessments under the revenue model in current situation. If a contract with a customer includes variable consideration like , price concessions, performance bonuses, discounts, refunds and penalties, an entity is required to estimate the amount of consideration at the time of making of contract which it will receive in exchange of promised goods or services. An entity may have to consider the return of the goods policy at the time of inception of the contract.

The amount of variable consideration an entity can include in the transaction price is controlled to the amount for which there is high possibility that a major reversal of revenue included in the financial statements will not occur when the uncertainties related to the variability are resolved. The entity may have to revise its estimates of variable consideration to reflect an entity's revised prospects about the amount of revenue which it expects to receive, taking into considerations uncertainties associated with the COVID-19 outbreak. Further, one of the criteria for a contract to exist is that it must be probable that the entity will be able to collect the revenue of the contracts to which it will be entitled during the trading of the goods or services. In order to decide whether terms of revenue contracts will be met or not with respect to COVID-19 outbreak, the entity must assess its customers' ability to pay.

Under Ind AS 115, if a contract includes variable consideration, then a company estimates the amount of consideration to which it will be entitled. Variable consideration includes discounts, rebates, refunds, credits, price concessions, incentives, performance bonuses, penalties and other similar items. It may be explicit or implicit – e.g. based on the company's customary business practices or specific statements.

Companies need to consider cautiously whether actions taken to respond to the COVID-19 outbreak leads in additional variable consideration – e.g. incentives or discounts offered to customers. Furthermore, if a company's supply chain or workforce is disrupted such that it cannot satisfy its obligations, then this could result in penalties that reduce the contract price.

A company estimates variable consideration but includes it in the transaction price only to the extent that it has high possibility that a major reversal of revenue will not occur.

A company's estimate of the constrained amount may be impacted significantly by COVID-19. For example, falling demand may impact whether customers will qualify for rebates or volume discounts. Further, transport companies may need to revise the estimated revenue due to an increase in refunds to customers because of cancelled or delayed journeys. Companies need to reassess the estimated transaction price at each reporting date.

Under Ind AS 115, a company allocates the prices of each obligatory performance that is identified as individual selling price. It is the price at which the entity will perform their obligatory performance separately to a customer. When the individual selling price is not directly assessable, the entity will estimate the individual selling price taking into consideration the available information.

COVID-19 may impact these estimates drastically, either because observable selling prices change or because inputs to estimate techniques change. This may in turn influence the amount of revenue recognition for each good or service that are transferred in the contract.

Companies need to make sure that they use up-to-date estimates in allocating the transaction price for the new contracts. On the other hand, after contract begins the transaction price is not readjusted to show the subsequent changes in selling prices.

When a company transfers ownership of a good or service eventually, revenue is recognised by measuring the progress towards fulfilment of performance obligation. This is followed in various sectors like aerospace, real estate, construction, defence and engineering. A company can use an input or output method to depict its performance in transferring control of goods or services for applying a single method of measuring progress.

When Input method is used by the company- for example costs incurred as a percentage of expected total costs – it needs to estimate the total expected inputs that will be needed to satisfy the performance obligation. COVID-19 may impact project timelines if work cannot be completed to schedule. It may also push up the costs of key inputs.

Companies need to make sure that the estimated progress and revenue recognised shows the latest expectations. Any changes in this estimate are accounted prospectively.

Revenue recognition is the most effected accounting element due to COVID-19 Pandemic crisis. For financial reporting requirement, in revenue recognition following are the points have to be considered when preparing the financial statements by the management. The following are the action that can be taken by the Management are :

1. Is there any variable consideration in the contract or not. For e.g. Penalties for delayed performance or customer incentives
2. Evaluate the estimates of variable consideration.
3. Appraise whether the estimated selling prices need to be updated.
4. Evaluate whether the progress towards satisfaction reflects the latest expected total inputs when revenue is recognized over time using an input method.
5. Proper disclosures to be made about the stand alone selling prices, methods, inputs and assumptions used for estimating variable consideration.

### Conclusion:

As a result of the uncertainty associated with the unprecedented future of the COVID-19 pandemic, entities

faced challenges related to selecting appropriate estimates and in developing reliable estimates. Nevertheless, still they will be required by Ind AS 115 to develop estimates that underlying various accounting conclusions. Given the increased customer defaulting on payments and supply chain destructions, companies may be made to modify the terms of their existing contracts which in turn may affect the recognition of revenue. Companies offering customer incentives like discounts and rebates should assess the estimates involving variable considerations. Companies offering extended payment terms should assess whether the contract contains a financial component that can be interest or penalties.

Revenue can be recognized only when the collection of consideration is probable, for which the existing contracts should also be reassessed for collectability.

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# Corporate Social Responsibility



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Today's CSR programs have their roots in corporate philanthropy. Wealthy businessman and philanthropist Andrew Carnegie challenged wealthy people to support social causes, following his belief in the Gospel of Wealth. In the late 1800s, John D. Rockefeller, taking inspiration from Carnegie, followed suit in donating more than half a billion dollars.

Howard Bowen, an American economist and Grinnell College president, is often cited as the "father of CSR." He connected the responsibility of corporations to society and published a book in 1953, which advocated for business ethics and responsiveness to societal stakeholders called Social Responsibilities of the Businessman.

CSR truly began to take hold in the U.S. in the 1970s, when the concept of the "social contract" between business and society was declared by the Committee for Economic Development in 1971. The social contract is based on the idea that business functions because of public "consent," therefore business has an obligation to constructively serve the needs of society. This is often referred to today as "license to operate" – that is to contribute more to society than solely their products for sale.

- While doing web search about CSR and CSR policies apparently one feels that lot many things have been done in foreign countries and India has borrowed the concept from the foreign countries. But, the fact is that the concept of CSR has existed in ancient India and our ancient wisdom has framed a platform for CSR and the proud moment is such ancient wisdom has given direction to the corporate houses and industries. Our rich ancient knowledge and tradition is the very basis of modern corporate level CSR practices. The origin of CSR can be traced from our Upanishads, Puranas and Vedic literature like Ramayana, Mahabharata, and Bhagavad-gita.
- The new concept of Corporate Social Responsibility has been introduced by the Companies Act, 2013.
- Under the erstwhile Companies Act, there was no concept of Corporate Social Responsibility.
- The new concept of Corporate Social Responsibility has been introduced under section 135 of the Companies Act, 2013 and Companies (Corporate Social Responsibility) rules, 2014.
- India is the first country in the world to introduce statutory Corporate Social Responsibility (CSR) through the new Companies Act, 2013. Prior to this landmark development, CSR was not a new concept in India and can be traced with historic pieces of evidence.

Applicability of CSR Provisions under companies Act, 2013: (On every Company including its holding or subsidiary having):

- Net worth of Rs. 500 Crore or more, or
- Turnover of Rs. 1000 crore or more, or
- Net Profit of Rs. 5 crore or more

## CSR Committee:

Every Company on which CSR is applicable is required to constitute a CSR Committee of the Board:

- Consisting of 3 or more directors, out of which at least one director shall be an independent director. However, if a company is not required to appoint an independent director, then it shall have in 2 or more directors in the Committee.
- Consisting of 2 directors in case of a private company having only two directors on its Board
- Consisting of at least 2 persons in case of a foreign Company of which one person shall be its authorized person resident in India and another nominated by the foreign company

## Display of CSR Activities on its Website

The BOD shall disclose contents of CSR policy in its report and the same shall be displayed on the company's website, if any.

Form CSR-1 Filing for registration to undertake CSR Activities:

Form CSR-1 is required to be filed pursuant to section 135 of the companies Act, 2013 and Rule 4(1) and (2) of the companies (Corporate Social Responsibility) Rules, 2014 as amended by the companies (Corporate Social Responsibility policy) Amended Rules, 2021

- Form CSR- 1 is required to be filed with the registrar Registrar of companies (MCA), with effect from the 01st April, 2021.

Role of Practicing Professionals in the field of CSR:

- Form CSR-1 is signed by a cost accountant/ chartered accountant or company secretary in whole time practice.

Form of CSR-1 is available in the website of MCA (link given in the below);

[http://www.mca.gov.in/MCA21/dca/download/forms/eformTemplates/NCA/Form\\_CSR-1.zip](http://www.mca.gov.in/MCA21/dca/download/forms/eformTemplates/NCA/Form_CSR-1.zip)

Examples of CSR in India:

- TATA Group
- Mahindra & Mahindra
- Infosys Group
- ITC Group

Today, CSR is essential to the bottom line, and corporate citizenship professionals are empowered to align their work with the business to maximize impact. As new professionals join the field every day, it's important to look back on how CSR has evolved and who those early contributors were.

Note: The Authors views are personal & will not be responsible for any cause of decision taken by referring it.

# Search and Seizure under GST



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Goods & Service Tax act has been implemented from 1st July, 2017. We shall be completing 4 years of implementation of this law. We hear of cases of ITC rackets, frauds and arrests under GST causing loss of revenue to the Government.

Any law will provide for safeguards against tax evasion, frauds, suppression of facts, concealment of information and records etc. The Tax payer's intention may be to evade tax or not to discharge his tax liabilities in line with provisions of law.

This "intention to evade tax" on the part of Tax payer and "reason to believe that tax is evaded" on the part of the Department basically leads to so called "RAIDS" under the Act.

Sections 67 to 72 of CGST Act, 2017 deals with Inspection, Search, Seizure and Arrest.

If the proper officer is of the opinion that a Tax payer has (1) suppressed any transaction of supply of goods/ services, (2) suppressed any information on stock of goods, (3) claimed ITC beyond entitlement, (4) evades tax by indulging into contravention of any provisions of the Act/Rules and (4) in case of Transporter or owner of warehouse/godown, if he stores goods with an intention to evade tax or maintains accounts in such a way that there can be evasion of tax.

In above circumstances Inspection can be ordered by "Principal Officer" means the Commissioner or the officer who is assigned such function by the Commissioner. Proper officer will be not below the rank of Joint Commissioner who can authorize any subordinate officer to conduct the inspection or search or, as the case may be, seizure of goods, documents, books or things liable to confiscation.

For this purpose the Commissioner is equated with "Magistrate" under Indian Penal Code. The Commissioner can therefore order arrest and grant bail to the tax payer concerned.

The officers may, for reasons to be recorded in writing, seize the accounts, registers or documents and grant receipt thereof. Such records shall be retained so long as may be necessary in connection with the proceedings under this Act/Rules or prosecution.

The result of above actions by the department will be

search of premises, almirahs or places where some incriminating documents are likely to be there.

There are instructions issued under Instruction no. 01/2020-21 (GST Investigation) dated 02/02/2021 giving guidelines regarding procedures to be followed during Search operation by the department. Briefly stated -

- (1) The officer issuing authorization for search should have valid and justifiable reasons for authorizing a search, which shall be recorded in writing. The search must be carried out with proper authorization with DIN no.
- (2) The search can be conducted on the premises of a person named in the search warrant only. The officers shall first identify themselves by showing their identity cards to the person in-charge of the premises.
- (3) The search authorization must be shown to the person and his signature obtained on the body of the search warrant.
- (4) In case of search of a residence, a lady officer shall necessarily be part of the search team.
- (5) The search has to be conducted in presence of two or more independent witnesses duly informed about the purpose.
- (6) A Panchnama containing truthful account of the proceedings shall be made and list of documents/ goods/things recovered should be prepared.
- (7) In the sensitive premises videography of the search proceedings may also be considered and same to be recorded in the Panchnama.
- (8) The officers have to be sensitive about the social and religious sentiments and respect the persons under search.
- (9) Copies of documents seized may be allowed or take extracts from the documents unless it prejudicially affect the investigation. Such request of copies made must be mentioned in the Panchnama.
- (10) The Panchnama must be signed on each page by officer authorized and copy of Panchnama



along with all its annexures must be given to the person in-charge of the premises searched and acknowledgement taken.

- (11) In case any statement is recorded during search, each page of the statement must be signed by the officer as "Before me".
- (12) After conclusion of the search, the search authorization duly executed should be returned to the officer who had issued the authorization along with outcome of the search. The officers should leave the premises immediately after completion of Panchnama proceedings.

#### **What should be the stand of Tax payer during Search:**

- 1) No need to panic as the authorities can only search and take away documents of interest to them based on information available with them.
- 2) Let the authorities do their work. Do not try to call friends or business associates. Never obstruct their work.
- 3) In case the authorities want to record a statement give correct answer if you are sure otherwise say "Don't know".
- 4) Do not argue unnecessarily or irritate the authorities as it can only go against you. Maintain absolute calm and cooperate with authorities in

as much as you can for giving them documents required or information required.

- 5) Do not agree to something which is not correct either in a statement or panchnama. However, remember you always have a right to retract the statement given by you.
- 6) The authorities can ask you your passwords to extract information or accounts. Remember, they can not ask passwords to transfer funds from your Bank account.

#### **What after the search is over:**

At the conclusion of the search a Panchnama will be drawn out and signed by Panchas, Tax payer and the authorities.

The Officers authorized for search will have to close the search warrant by handing over all the documents seized to the Principal officer. The proceedings like issue of Show cause notice has be initiated by the concerned jurisdictional authorities. Question of paying any tax will arise only after passing of an adjudication order. However, there are instances where authorities pressurize Tax payer to make payment during the search. This is absolutely unlawful and cannot stand the test of equity and justice. Unfortu nately, many a times the powers are misused. It is rightly said that "power corrupts and absolute power corrupts absolutely". Let us not loose hopes, we have a rule of law in our country.

## **Celebrations on 62nd Foundation Day of our Institute through Social Media**

One of the Historic celebrations on 62nd Foundation Day of our Institute through Social Media. For the first time ever, we created Frames on Facebook and Filters on Instagram & Facebook. We received astounding response from all the Members as well as Students fraternity. It is really a pleasure for us to put forward the statistics of that day as on 28th May till Midnight.

On Filters, 5000+ people took action and opened the same to try it on their Social media cameras and more than 1700 people captured and shared it on their Social Media feeds and stories which was a very overwhelming response for the efforts we took to celebrate the special day. On Facebook Profile Picture Frames more than 1000 Members & Students applied the frames on their Social Media Profiles. On behalf of the Social Media Army, we Thank You all for your amazing support for making our new initiative successful. Keep supporting us in all our Initiatives and if you have any ideas or suggestions on how we can use Social Media more effectively for our Institute, please mail us your ideas on [wirc.admin@icmai.in](mailto:wirc.admin@icmai.in).

Thank You  
Social Media Army - WIRC of ICMAI

# Job Work Charges – a separate line item in product cost sheet



**CMA Rajesh Kapadia**

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Sometimes, Company outsources manufacturing of some products.

Company provides Raw Materials and Packing Materials and pays Job Work Charges (i.e. Conversion Charges) to Third Party who will process the Raw Materials on behalf of the Company.

In Product Cost Sheet, it should appear as separate Line Item.

There will be a Separate GL in Financial Accounting (Say GL name is Job Work Charges ) from where the value will be picked up for Product Cost Sheet.

As Plant and Machinery are owned by Third Party, expenses like Consumable Stores, Repaires Expenses, Employee Cost, Depreciation, Insurance and other overheads will not appear as separate Line Items in Product Cost Sheet as these are incurred by Third Party and they are already included in Job Work Charges.

Advantage for the Company is that Company can focus on its Core Business Activities and at the same time, it can have its presence in non-core products by getting them manufactured by Third Party.

Following may be the Practical Situations (As mentioned in Annexure I ) and their probable solution.

## 1) Product Made on Job Work

One Profit Centre and One Product.

In Financial Accounts, In GL Job Work Charges, Value of Job Work Charges will be debited against the relevant Profit Centre.

This Value will appear in Product Cost Sheet

## 2) Product Made on Job Work

One Profit Centre but More Than One Products

In Financial Accounts, In GL Job Work Charges, Value of Job Work Charges for all the Products will be debited against the relevant Profit Centre.

For Individual Product Cost Sheet, Job Work Charges will be ascertained considering Production Volume and Job Work Charges Per Unit for Individual Product.

## 3) It may be possible that Same Product Company Manufactures as well as get it manufactured by Third Party.

In such situation, it is advisable to have separate Profit Centres for both above.

Separate Cost Sheets should also be prepared.

This will enable to ascertain Cost as well as Margin from both the Profit Centres.

Some times, it also helps company to negotiate Job Work Charges with Third Part on the basis of Its Own Cost Sheet

- 4) For MIS purpose, it should get reported as variable cost of the product.
- 5) At the time of executing Job Work Agreement, Raw Material Norms are usually decided mutually between Third Party and Company.
- 6) For Quarterly Audit, it is a usual practise to obtain Certificate from Third Party with respect to Inventory held by them on behalf of the Company - Raw Materials, Packing Materials and Finished Products.
- 7) These Certificates are provided to the Auditors.

## ANNEXURE 1

PARTICULARS	PRODUCT / PRODUCTS MADE ON JOB WORK BASIS		Allocation / Apportionment/ Absorption
Profit Centre 1	PRODUCT A		IN PRODUCT COST SHEET IT WILL APPEAR AS JOB WORK CHARGES
Profit Centre 2	Following Products are Made :	Allocated to	In Product Cost Sheet of Individual Product it will appear as Job Work Charges
	Product B	Product B	
	Product C	Product C	
	Product D	Product D	
	Product E	Product E	
	Product F	Product F	
		On the basis of Production Qty multiplied by Job Work Charges Per Unit	

NOTE : Views expressed are personal views of the author

# GST Corner



**Compiled by**  
**Shri R. L. Kabra**  
Superintendent, CGST



**Compiled by**  
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**GST Council Meeting:** On 28th May 2021, the honorable Finance Minister Nirmala Sitharaman chaired 38th GST council meeting. Various proposals were discussed during the meeting in respect of reduction in rate of various services & exemption of the goods directly used for Covid-19, relaxation in filing of return, reduce rate of interest & waiver of late fees.

## Summary of points discussed during the council meeting

### Rate Revision/Clarification:

#### \* Goods:

- Proposed to remove levy of IGST on import of all the products, which will solely use for Covid -19 irrespective of whether the product will be donating to Central/State Govt. The exemption is valid till 31st August 2021.

**List of Products:** Medical oxygen, oxygen concentrators and other oxygen storage and transportation equipment, certain diagnostic markers test kits and COVID-19 vaccines.

- If any upsurge in the case of Black fungus, the Govt. may offer relaxation on payment of IGST on import of Amphotericin B.
- Proposed to reduce the rate of Diethyl-carbamazine (DEC) tablets from 12% to 5%.
- To clarify that GST rate on part of sprinkler /drip irrigation system is 12% irrespective of whether the entire system will be supplied or supply of the separate parts.

#### \* Services:

- Supply of the loan guarantee services by the Government undertaking their undertaking/PSU shall be treated as an "Exempted Services."
- Proposed to levy GST at 18% on supply of rope-way construction services to a Government Entity.
- Levy of IGST on goods are re-imported after completion of repair services.
- Revise rate of GST on MRO services in respect of ships/vessels shall be reduced to 5% from 18%. GST to be paid based on the location of recipient of service.
- No GST to be charged on the services supplied to education institute including "Aanganwadi" services.
- Service by way of milling of wheat/paddy into flour

(fortified with minerals etc. by millers or otherwise )/rice to Government/ local authority etc. for distribution of such flour or rice under PDS is exempt from GST if the value of goods in such composite supply does not exceed 25%. Otherwise, such services would attract GST at the rate of 5% if supplied to any person registered in GST, including a person registered for payment of TDS.

- Proposed to amend the notification in respect of admissibility of Input Tax Credit (ITC) to the land owner promoter on the invoice raised by the developer promoter. ITC will be lapsed on issuances of the completion certificate. Hence, the land owner shall require to avail ITC before issuance of the completion certificate.
- GST is payable on annuity payments received as deferred payment for construction of road. Benefit of the exemption is for such annuities which are paid for the service by way of access to a road or a bridge.
- To pay interest only on cash liability under Section 50 of CGST Act (Retrospective amendment)

¢ **Annual Compliance:** Proposed threshold limit to file GST Annual Return (GSTR-9) and self-certify the reconciliation statement (GSTR -9C) for F.Y. 2020-21

Applicable (Type of Forms)	Aggregate Turnover
GSTR 9 /GSTR 9A(Obligatory)	Up to Rs. 2 Crores
GSTR 9	Above Rs. 2 Crores upto Rs. 5 Crores
GSTR 9C	Above Rs. 5 Crores

- \* The facility to file GST returns through Eusing Electronic Verification Code (EVC), instead of Digital Signature Certificate (DSC) has been extended up to 31.08.2021.
- \* Proposed to amend GST Act to adopt present compliance system i.e. filing of GSTR -1 & GSTR-3B as a default filing system.
- \* Recommended to give effect of Rule 36(4) of CGST rules on cumulative basis pertaining to April, May & June 2021 in the return for the period of June 2021.
- \* Time limit for completion of various actions, by any authorities or by any person, under GST Act, which falls during the period from 15.04.2021 to 29.05.2021 to be extended up to 30.06.2021. (Whenever the timelines for actions have been extended by the Supreme Courts, it would apply in that case)

- \* **Amnesty Scheme:** Introduce a scheme to offer an opportunity to the taxpayer to furnish the pending GSTR -1 & GSTR-3B from July 2017 to April 2021 with reduction in late fees:

Tax liability	Late Fees
Nil Tax Liability	Maximum of Rs 500/- per return (Rs. 250/- each for CGST & SGST)
Other Taxpayer	Maximum of Rs 1000/- per return (Rs. 500/- each for CGST & SGST)

The taxpayer shall require to complete the pending compliance before end of 31.08.2021.

- \* **Extension in other due dates:**

Type of Return	Period	Existing Due Date	Revised Due Date
GSTR -1	May 2021	13-06-2021	28-06-2021
GSTR 4	F.Y. 2020-21	31-05-2021	31-07-2021
FORM ITC-04	January to March 2021	31-05-2021	30-06-2021

- \* **Monthly Compliance Calendar: For March and April 2021 (revised due dates):**

Category of Taxpayer (based on turnover limit)	Month	Current Due Date	Revised Due Date without late fees	Rate of Interest
<b>&gt; Rs. 5 crores in PFY</b> (monthly taxpayer and monthly GSTR 3B filers)	March 2021	20-04-2021	05-05-2021	<ul style="list-style-type: none"> <li>• 9% till 05-05- 2021</li> <li>• 18% thereafter</li> <li>• 9% till 04-06-2021</li> <li>• 18% thereafter</li> </ul>
	April 2021	20-05-2021	04-06-2021	
<b>&lt; Rs. 5 crores in PFY</b> (monthly taxpayer and monthly GSTR 3B filers)	March 2021	20-04-2021	19-06-2021	<ul style="list-style-type: none"> <li>• Nil till 05-05-2021</li> <li>• 9% thereafter till 19-06-2021</li> <li>• 18% thereafter</li> <li>• Nil till 04-06-2021</li> <li>• 9% thereafter till 04-07-2021</li> <li>• 18% thereafter</li> </ul>
	April 2021	20-05-2021	04-07-2021	
<b>&lt; Rs. 5 crores in PFY</b> (monthly taxpayer and quarterly GSTR 3B files under QRMP)	January to March 2021**	22-04-2021	21-06-2021	<ul style="list-style-type: none"> <li>• Nil till 07-05-2021</li> <li>• 9% thereafter till 21-06-2021</li> <li>• 18% thereafter</li> <li>• Nil till 09-05-2021</li> <li>• 9% thereafter till 23-06-2021</li> <li>• 18% thereafter</li> </ul>
	January to March 2021 ***	24-04-2021	23-06-2021	
<b>Composite Taxpayers</b> (FORM CMP-08)	January to March 2021	18-04-2021	18-04-2021	<ul style="list-style-type: none"> <li>• Nil till 03-05-2021</li> <li>• 9% thereafter till 17 -06-2021</li> <li>• 18% thereafter</li> </ul>

\*\* **Category - A States:**

Chhattisgarh, Madhya Pradesh, Gujarat, Dadra and Nagar Haveli, Daman and Diu, Maharashtra, Karnataka, Goa, Lakshadweep, Kerala, Tamil Nadu, Puducherry, Andaman and Nicobar Islands, Telangana and Andhra Pradesh

\*\*\* **Category - B States:**

Jammu and Kashmir, Ladakh, Himachal Pradesh, Punjab, Chandigarh, Uttarakhand, Haryana, Delhi, Rajasthan, Uttar Pradesh, Bihar, Sikkim, Arunachal Pradesh, Nagaland, Mizoram, Manipur, Tripura, Meghalaya, Assam, West Bengal, Jharkhand and Odisha

**For May 2021 (revised due date):**

Category of Taxpayer (Turnover limit)	Current Due Date	Extended Due Date without late fees	Rate of Interest
<b>&gt; 5 crores in PFY.</b>	20-06-2021	05-07-2021	<ul style="list-style-type: none"> <li>• 9% till 05-07- 2021</li> <li>• 18% thereafter</li> </ul>
<b>&lt; 5 crores in PFY.</b>	20-06-2021	20-07-2021	<ul style="list-style-type: none"> <li>• Nil till 05-07-2021</li> <li>• 9% thereafter till 20-07-2021</li> <li>• 18% thereafter</li> </ul>

Note: The Department will issue relevant notification/clarification which alone shall have the force of law.

(Source: Press release 43rd Meeting of the GST Council dated 28th May 2021)

# Direct Tax Corner

Compiled by  
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The CBDT has issued Circular Number. 9 dated 20/05/2021 giving relaxation to the various compliance dates.

- 1) The Statement of Financial Transactions (SFT) for the Financial Year 2020- 21 , required to be furnished on or before 31st May 2021 under Rule 114E of the Income-tax Rules, 1962 (hereinafter referred to as "the Rules") and various notifications issued thereunder, may be furnished on or before 30th June 2021;
  - 2) The Statement of Reportable Account for the calendar year 2020, required to be furnished on or before 31st May 2021 under Rule 114G of the Rules, may be furnished on or before 30th June 2021;
  - 3) The Statement of Deduction of Tax for the last quarter of the Financial Year 2020-21 , required to be furnished on or before 31st May 2021 under Rule 31A of the Rules, may be furnished on or before 30th June 2021;
  - 4) The Certificate of Tax Deducted at Source in Form No 16, required to be furnished to the employee by 15th June 2021 under Rule 31 of the Rules, may be furnished on or before 15th July 2021;
  - 5) The TDSITCS Book Adjustment Statement in Form No 24G for the month of May 2021 , required to be furnished on or before 15th June 2021 under Rule 30 and Rule 37CA of the Rules, may be furnished on or before 30th June 2021;
  - 6) The Statement of Deduction of Tax from contributions paid by the trustees of an approved superannuation fund for the Financial Year 2020-21, required to be sent on or before 31 st May 2021 under Rule 33 of the Rules, may be sent on or before 30th June 2021;
  - 7) The Statement of Income paid or credited by an investment fund to its unit holder in Form No 64D for the Previous Year 2020-21 , required to be furnished on or before 15th June 2021 under Rule 12CB of the Rules, may be furnished on or before 30th June 2021;
  - 8) The Statement of Income paid or credited by an investment fund to its unit holder in Form No 64C for the Previous Year 2020-21, required to be furnished on or before 30th June 2021 under Rule 12CB of the Rules, may be furnished on or before 15th July 2021;
  - 9) The due date of furnishing of Return of Income for the Assessment Year 2021-22, which is 31st July 2021 under sub-section (1) of section 139 of the Act, is extended to 30th September 2021;
  - 10) The due date of furnishing of Report of Audit under any provision of the Act for the Previous Year 2020-21, which is 30th September 2021, is extended to 31 st October 2021;
  - 11) The due date of furnishing Report from an Accountant by persons entering into international transaction or specified domestic transaction under section 92E of the Act for the Previous Year 2020-21, which is 31st October 2021, is extended to 30th November 2021;
  - 12) The due date of furnishing of Return of Income for the Assessment Year 2021-22, which is 31 st October 2021 under SUB-section (1) of section 139 of the Act, is extended to 30th November 2021;
  - 13) The due date of furnishing of Return of Income for the Assessment Year 2021-22, which is 30th November 2021 under sub-section (1) of section 139 of the Act, is extended to 31st December 2021;
  - 14) The due date of furnishing of belated/revised Return of Income for the Assessment Year 2021-22, which is 31 st December 2021 under sub-section (4)/sub-section (5) of section 139 of the Act, is extended to 31 st January 2022.
- Clarification 1:** It is clarified that the extension of the dates as referred to in clauses (9), (12) and (13) above shall not apply to Explanation 1 to section 234A of the Act, in cases where the amount of tax on the total income as reduced by the amount as specified in clauses (i) to (vi) of sub-section (1) of that section exceeds one lakh rupees.
- Clarification 2:** For the purpose of Clarification 1, in case of an individual resident in India referred to in sub-section (2) of section 207 of the Act, the tax paid by him under section 140A of the Act within the due date (without extension under this Circular) provided in that Act, shall be deemed to be the advance tax.

# CHAPTER NEWS

## AHMEDABAD

### Celebration of Foundation Day of the Institute

On the occasion of 62nd foundation day of our Institute, Chapter had organised a talk show on "Anxiety Management in Recent Times". The talk was addressed by distinguished Psychiatrist Doctor Navin D Modi and Past Chairman of the Chapter, CMA P D Modh. The interactive session was moderated by the Chapter's PD&P Committee Chairman CMA Dakshesh Choksi. The talk-show was very much relevant in the current times when the people are facing the Corona Fabia. The session was conducted through 'Question-Answer mode and the learned Dr. Navin Modi and CMA P D Modh answered various questions posed by the Moderator and explained how to overcome the fear, Impact of a death in our near social circle, how to overcome depression, how to remain positive in a period of such a grave pandemic and how to keep our mind healthy & fit along with our physical fitness. The sessions was attended by the CMAs alongwith their family members. CMA Ashwin Dalwadi, entral Council Member, CMA Ashish Bhavsar, Hon. Secretary of WIRC, CMA H. P. Bhatt, Chairman of the Chapter & CMA Malhar Dalwadi, Secretary of the Chapter participated in the program.

### Drawing and Rangoli competition

On the occasion of 62nd foundation day of CMA Institute, Ahmedabad Chapter had organized "Home base -Drawing and Rangoli competition" for CMA Students of Ahmedabad Chapter.

The topics for the Competition were: Corona Warriors, Pre and Post Corona Environment, Vaccination & Online Learning

Large number of students have participated in the Drawing and Rangoli competition. It was a very good idea to reach the maximum people and pay tribute to the real heroes the corona warriors of this pandemic situation.

### "Commemoration of CMA Foundation Day and Prize distribution

CMA Mitesh Prajapati-Chairman Oral Coaching Committee Welcomed the Guest of Honour CMA Ashwin Dalwadi, Central Council Member and Chairman of IT Committee of the Institute, CMA Ashish Bhavsar, Regional Council Member and Secretary of WIRC of ICAI. CMA Mitesh prajapati also welcomed Management Committee members and Students.

Smt. Swetaben Dave appointed as a Jury member for the Competition, CMA Mitesh Prajapati Welcomed the Jury member and gave Brief Introduction of her. CMA Haren Bhatt-Chairman of Ahmedabad Chapter gave Introduction of the Guests to the audience and addressed the Participants. He also appreciated the idea of homebased drawing and rangoli competition.

CMA Ashwin Dalwadi, CCM & CMA Ashish Bhavsar, Hon. Secretary WIRC extended warm greetings of CMA Foundation day and addressed the audience. The Program was highly appreciated by the guests and by all the Participants. Prize will be given to Winners of Rangoli and Drawing competition.

CMA Malhar Dalwadi -Secretary of Ahmedabad Chapter offers a formal vote of thanks.

## BARODA

Chapter have arranged a webinar on 'CMA as an Internal Auditor' on 8th May, 2021. Mr. Ashish Jaiswal., speaker was felicitated by CMA Vandit Trivedi. The Vote of thanks was proposed by CMA Hardik Diwanji, Chairman of Baroda Chapter. More than 50 members and students have benefited from the said session.

## BHARUCH-ANKLESHWAR

Chapter celebrated Foundation Day of the Institute by Organising a Webinar on on 28.05.2021. Webinar was addressed by CMA S N Mudra, Founder Chairman of the Chapter. He explained importance of CMA profession in current situation and wish all the members on CMA foundation day. CMA A.R. Patel, Hon. Secretary also explained about profession. CMA R A Mehta, Chairman wish all the members and students on foundation day. CMA R Rathi, Vice Chairman proposed vote of thanks.

## NAVI MUMBAI

### Webinar on Introduction to SAP S4 / HANA

Chapter conducted a Webinar CEP programme on "Introduction to SAP S4 / HANA" on 16th May 2021 through Google Meet app.

The speaker for this event was Mr. Jayesh Maru Project Manager - TCS. He was welcomed by CMA Sirish Vasant Mohite Chairman of the Chapter.

CMA Vivek Bhalerao P.D. Committee Chairman of the Chapter welcomed the participants and initiated the programme The participants consisted of Cost Accountants in Employment as well as in Practice and it was a very good interactive session which benefited professionals working in Organisation having SAP as well as practising Members who got a very good insight on how to do consultancy/ audit in SAP environment .The number of participants went passed the magic figure of 100 and it was an excellent interactive session .

The presentation & the interactive workshop came to an end with the Vice - Chairman of the Chapter CMA Vaidyanathan Iyer highlighting the discussion during the session along with the Vote of Thanks.

## PIMPRI-CHINCHWAD-AKURDI

### Webinar on "Role of CMAs in NBFC and Financial Services Sector"

Chapter conducted webinar on 'Role of CMAs in NBFC and Financial Services Sector' on 8th May 2021 through Google Digital platform.

CMA Mandar Jadhav, Member of the Managing Committee of PCA Chapter has welcomed all the participants and introduced the speaker CMA Daidyanathan Iyer, Practicing Cost Accountant. He focused pre-requisites on the topic and covered Categories of NBFCs, Regulations on NBFCs, Capital Adequacy Ratio

- Also known as Capital to Risk (Weighted) Assets Ratio (CRAR), Ceiling on acceptance of Public Deposits, Ratings Criteria, Public Deposit Regulations etc.

The session was well interactive. There was overwhelming response by the Members in practice, Professionals, Members from industries and Students.

### Webinar on "Human Productivity"

Chapter conducted webinar on 'Human Productivity' on 15th May 2021 through Google Digital platform.

CMA Sagar Malpure, Managing Committee of PCA Chapter has welcomed all the participants and introduced the speaker CMA Ashish Deshmukh, Practicing Cost Accountant and Past Chairman of PCA Chapter.

CMA Ashish Deshmukh in his speech talk about MBO (Management by Objectives), a strategic management model that aims to improve the performance of an organization by clearly defining objectives that are agreed to by both management and employees. He also shared an inspirational story of Hollywood actor Arnold Schwarzenegger during the session. He shared his word "Strength does not come from winning. Your struggles develop your strength". In the conclusion, he said, Goal setting is not just about identifying what you want to achieve but also HOW you will achieve it (process goals) and MEASURE that achievement. Beginners require very short term, easily achieved goals to boost their self-confidence whereas the experienced individual need more challenging yet realistic goals.

### Webinar on "Discussion on Developing Cost and Management Consultancy and Implementation of ABCM in MSME units"

Chapter conducted webinar on 'Discussion on Developing Cost and Management Consultancy and Implementation of ABCM in MSME units' on 22nd May 2021 through Google Digital platform.

CMA Jayant Hampiholi, Chairman of PCA Chapter has welcomed all the participants and speaker CMA Baswaraj Mule. CMA Pradeep Deshpande, Secretary of PCA Chapter has introduced the speaker CMA Baswaraj Mule.

CMA Baswaraj Mule focused on the important topics such as Challenges for Management Consultancy, My Area of Consultancy, Preparation for Practicing CMA.

CMA Dhananjay Kumar Vatsayan proposed vote of thanks.

## PUNE

### CEP on "Case Studies in Startup Valuations "

Chapter arranged Webinar through Google meet on 11th May 2021 on subject "Case Studies in Startup Valuations".

CMA Rammohan Bhawe, Faculty & Consultant in IFRS/ Ind AS, Valuation was the Speaker for the programme.

CMA Smita Kulkarni, Secretary, Pune Chapter welcomed and introduced the speaker to the participants. CMA Rammohan Bhawe explained various cases with practical examples to the participants. Response of participants was overwhelming. CMA Shrikant Ippalpalli, Member of Pune Chapter delivered vote of thanks.

### CEP on "Forensics and Occupational Fraud - The role of Accounting Professionals in being the shield for organisations"

Chapter arranged Webinar on "Forensics and Occupational Fraud - The role of Accounting Professionals in being the shield for organisations" on 14th May 2021 through Google meet. CMA S Balasubramaniam, Former EVP & CFO Zensar Technologies was speaker for the programme.

CMA Smita Kulkarni, Secretary, Pune Chapter welcomed and introduced the speaker to the participants. CMA S Balasubramaniam, explained various examples of frauds & its detection with the participants. CMA Shrikant Ippalpalli, Member of Pune Chapter delivered vote of thanks.

### CEP on "Use of data analytics and visualizations in internal audit"

Chapter organized Webinar on "Use of data analytics and visualizations in internal audit" on 21st May 2021 through Google meet.

CMA Neha Dharurkar, was speaker for the programme. She is Risk Advisory Practitioner & Corporate Trainer. She explained various examples with presentation on Data Analytics or usage of tools for Internal Audit to the participants.

CMA Shrikant Ippalpalli, welcomed and introduced the speaker to the participants.

The session was very interactive and everybody participated actively. Large number of members attended the programme.

### Drawing and Rangoli competition organized by Ahmedabad Chapter on the occasion of Celebration of Foundation Day of the Institute on 28th May 2021

Rangoli Competition Winners:



1<sup>st</sup> Winner

Drawing Competition Winners:



1<sup>st</sup> Winner



2<sup>nd</sup> Winner



2<sup>nd</sup> Winner



3<sup>rd</sup> Winner



3<sup>rd</sup> Winner

## **WIRC Celebrated 62nd Foundation Day of Institute by organizing Blood Donation Camp at Thane SMFC - 28th May 2021**



### **Theme for July 2021**

Theme for July month is : **GST – 4 Year Child**

#### **Sub Theme :**

- GST – कल, आज और कल
- GST Returns
- GST – E Invoicing
- GSRT 9
- GSRT 9C – Self Certification V/s Audit Attestation
- E Way Bill

### **Themes for the month of August & September 2021**

**AUGUST 2021 :**

Cost Audit & Cost Records - COVID Pandemic Year

**SEPTEMBER 2021 :**

Infrastructure Sector - Role of CMA

Articles on the theme as well as other professional matters are invited along with scanned copies of their recent passport size photograph, email id, mobile number and scanned copy of declaration stating that the articles are their own original and have not been considered for anywhere else. Please send your articles by e-mail to [wirc.admin@icmai.in](mailto:wirc.admin@icmai.in) before **25th June 2021**.

Pls. Note the final decision to consider Article/Paper is left with Chairman – Editorial Board.

To,



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WESTERN INDIA REGIONAL COUNCIL,  
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