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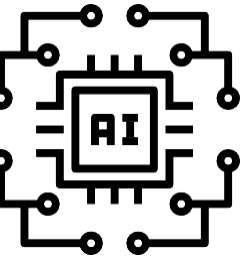
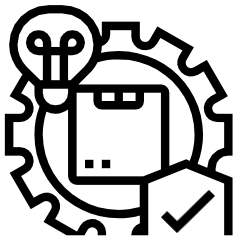
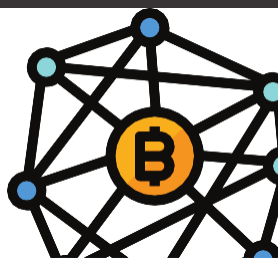






IMPACT OF INDIAN BUDGET 2022-2023 ON MANUFACTURING OPERATIONS

By Soumik Ghosh

The Indian budget for the year 2022-23 has brought a plethora of opportunities for the manufacturing sector. The budget has set a new goal for India to become a manufacturing hub and make India a global manufacturing destination. This budget has introduced various initiatives that would provide incentives to the manufacturing sector and promote the growth of the industry. The budget has made several announcements and initiatives that will positively impact the manufacturing sector.

Firstly, the budget has announced a new scheme called Production Linked Incentive (PLI) scheme, which will help in promoting the manufacturing of high-value goods in India. This scheme is expected to attract more investments in the manufacturing sector and promote domestic manufacturing.

Secondly, the budget has announced a significant increase in the outlay for the infrastructure sector, which is critical for the growth of the manufacturing sector. The budget has allocated INR 1.97 lakh crore to the infrastructure sector, which is a significant increase from the previous year. This investment will provide the necessary infrastructure to support the manufacturing sector, including transportation, logistics, and energy.

Thirdly, the budget has also announced several tax reforms, which will help the manufacturing sector in the long run. The Government has proposed a reduction in the corporate tax rate from 30% to 25% for companies with a turnover of less than INR 250 crore. This move will reduce the tax burden on small and medium-sized enterprises and provide them with more resources to invest in their businesses. Furthermore, the budget has also announced an increase in customs duty on certain imported goods, which will encourage domestic manufacturing. This move will also help in reducing the trade deficit, which will positively impact the Indian economy.

Lastly, the budget has also emphasized the need to promote the adoption of new technologies in the manufacturing sector. The government has proposed a significant increase in the outlay for the Department of Science and Technology, which will help in developing new technologies that can be adopted by the manufacturing sector.

In conclusion, the Indian budget 2022-23 has provided a positive outlook for the manufacturing sector. The various initiatives proposed in the budget will provide the necessary incentives and support for the manufacturing sector to grow and thrive. The Government's focus on promoting domestic manufacturing and adopting new technologies will make India a competitive manufacturing destination globally. It is now up to the manufacturing sector to seize these opportunities and make the most of Government's support.

EXTERNALITIES AND LIFE COSTING: UNDERSTANDING A COMMUNITY-ORIENTED APPROACH TO MANAGEMENT

By Anirudh Rao

Let us begin by asking what are externalities and life cycle costing?

Externalities and life cycle costing are two concepts in economics that are closely related to each other.

Externalities refer to the unintended costs or benefits that are generated by economic activity, but that is not reflected in the market price of the goods or services produced. These costs or benefits can be positive or negative and can affect people or the environment. For example, pollution from a factory is a negative externality that can harm the health of people living nearby or damage the natural environment.

Life cycle costing is a method used to evaluate the total cost of a product or service over its entire life cycle, including the costs of production, use, and disposal. This method takes into account all direct and indirect costs associated with a product, including environmental and social costs. Life cycle costing is often used to evaluate the sustainability of a product, and can help to identify opportunities for reducing its environmental impact or improving its social benefits.

In simpler terms, externalities are unintended costs or benefits that are generated by economic activity but not reflected in the market price, while life cycle costing is a method used to evaluate the total cost of a product over its entire life cycle, including its direct and indirect costs. Both concepts are important for understanding the economic and environmental impacts of our actions and can be used to promote sustainable development.

Now that we have understood externalities let's see an example of an externality to see how efficient operations work.

The likelihood that you will get back lost property is quite literally 0 if you consider India, now what happens?

How do you make this system efficient?

In a walkable city, you can have many many more small neighbourhood police boxes with 2 or 3 cops who carry out regular foot or bicycle patrols around the neighbourhood along with biannual home visits to know the concerns of the neighbourhood & provide relevant Information. So likely u know local police personally as you encounter them regularly, found a lost wallet? Just quickly pop into police likely u know local police personally as u encounter them regularly, and found a lost wallet? Just quickly pop into the police box & hand it over & go home.

How Tokyo's Massive Lost & Found Works

If you are a kid innocently handing in very small change u found, the officer will still take it, write a report & encourage u to let u know u did the right thing When Singapore suffered a high crime wave in the '80s. the police there were forced to study different systems & decided they need to discard the colonial British model of cruising around in cars & adopt the Japanese koban model (modified for Singapore's conditions) which they did with Japanese help. This prevented the problem of endless debates or falling for Techbro scams.I will let the Singapore police explain. Here is why Singapore decided to switch from Brit-style motorized policing to a more Japanese model with their help after crime peaked in the 1980s.

Khoo Boon Hui: That's where I studied under people like Ezra Vogel, the expert on Japan, AndI got interested in the Koran system. Incidentally, the Government also had us, the police, examine how we could implement the Koban system.

COS: Can you share a little bit about the Koran system and what made you interested in that?

Khoo Boon Hui: Okay. Traditionally our police force, because of the way it had a colonial past, was one whose role was just to maintain law and order. Therefore, the policeman were seen as officers to be feared, so that they could control the population. Our police stations were built at major road junctions, so that if there was a riot, we could control all the roads.

A few years back a research team carried out a lost wallet return study in world studies as a test of honesty. When asked why not in Japan, the paper author replied that they couldn't control the ubiquity of Koban which made it much easier to return the lost property in Japan vs elsewhere u can't have that city filled with your typical 2-wheeler EV horde vehicles as that model only works in a walkable city like Tokyo or Osaka.
Most importantly, though, one must understand when it comes to kobans they are making themselves accessible and available for anything that might come up, whether a true emergency or a simple request for directions.

"Ritsuban" basically means to "stand guard". its a practice that dates back to the early Meiji Era (1868-1912), when Japan set up its modern police system. But its important to understand that the officers you have seen outside police stations are doing more that protecting the facility and watching out for trouble. They are also making themselves visible to reassure citizens and deter those with criminal intent.Most importantly, though, they are making come up, whether a true emergency or a simple request for directions. In effect, it is like moving the front desk out onto the street.

Some readers might appreciate a word, at this point, about the officers stick. It is called a *keigo* and it is not meant to support the body while standing, as people sometimes presume, but rather to fend off possible attackers. It originates in a martial art developed centuries ago by samurai of the Fukuoka clan to subdue enemies with a minimum of bodily harm. The keijo was adopted as standard equipment with by the Tokyo police around 1930, and it soon spread to police forces around the country. Today, Japanese police do carry guns, but whenever possible they respond with less deadly weapons first.

The kōban is the centre of that activity, and the first assignment for every graduate of the police academy is to work at a kōban as a chiiki keisastukan (community police officer). to conduct patorōru (patrols on foot or bicycle); go out on junkai renraku (routine visits to homes and workplaces to offer crime-prevention advice, listen to residents' concerns and take down emergency contact information).

The main responsibilities of a community police officer, as mandated by law, are to conduct *patororu* (patrols on foot or bicycle); go out on *junkai renraku* (routine visits to homes and workplaces to offer crime-prevention advice, listen to residents' concerns and take down emergency contact information); and of course, to conduct ritsuban. At Koran, officers can decide for themselves whether or not to hold a keigo while on ritsuban duty. Often they do without, in order to appear friendlier and more approachable.

Visible policing makes residents feel safer, according to Okinawa, and acts as a deterrent to crime. It is difficult, obviously,to quantify either factor, but communities do lobby regularly for increased patrols as well as keeping Koran staffed around the clock. And every year these are cases when an officer on ritsuban catches a criminal or stops a crime before it can happen.

Now how is this all connected to the management field you may ask?

Well by now you might have noticed a lot of concepts of management used by companies these days are quite inherent in the system, so how do we implement these ideas into say today's managerial practices? the answer remains elegant and simple that is to create a work culture which understands its surroundings and overcomes its challenges, which precisely means not tampering with it rather you consciously choose to holistically blend with your environment where in it starts supporting you rather than coming in your way.

To be formal in terms of operations management, the Koban system offers several lessons that can be applied to other industries. These include:

1. Strong emphasis on customer service: The Koban system places a strong emphasis on serving the needs of the community. Police officers are encouraged to be approachable and responsive to community concerns, which can improve community relations and foster trust.
2. Focus on problem-solving: The Koban system encourages police officers to take a proactive approach to addressing community problems, rather than just responding to emergencies. This can be applied to other industries by encouraging employees to identify and address problems before they become major issues.
3. Use of technology: The Koban system makes use of advanced technology to help police officers communicate with each other and with the community. For example, officers can use mobile devices to access real-time crime data and communicate with other officers. This can be applied to other industries by using technology to improve communication and collaboration between employees.
4. Collaboration: The Koban system emphasizes collaboration between police officers, community members, and other stakeholders. This can be applied to other industries by encouraging collaboration between departments and teams within an organization, as well as with external stakeholders such as customers and suppliers.

one potential new takeaway that the management field can draw from the Koban system is the importance of a community-oriented approach to management.

The Koban system is highly effective in part because it focuses on building strong relationships with the community and tailoring its approach to local needs and concerns. This approach can be applied to management by encouraging managers to take a more localized, community-oriented approach to manage their teams and

For example, managers could focus on building strong relationships with individual employees and tailoring their management style to meet the needs of each team member. They could also take a more collaborative approach to decision-making, soliciting input and feedback from employees and other stakeholders in order to build consensus and improve buy-in. By taking a community-oriented approach to management, organizations can build stronger relationships with their employees, customers, and other stakeholders, leading to improved morale, higher levels of engagement, and better overall performance. Overall, the Koban system offers several lessons that can be applied to operations management. By emphasizing customer service, problem-solving, the use of technology, and collaboration, organizations can improve their operational efficiency and foster stronger relationships with their customers and stakeholders.

SCOPE AND FUTURE OF BUSINESS ANALYTICS IN INDIA

By Pavan

In recent times, Business Analytics has been an area of key focus in most industries. With multitude of data floating in all verticals of a business, such as marketing, sales, finance, social media, etc., it becomes essential to analyze and understand the data to make better business decisions and market development. Business Analytics (BA) describes the skills, technologies, practices for constant pragmatic investigation and analysis of previous business performance to gain insight and drive industry preparation. Company analytics focuses on developing new insights and comprehension of firm operation predicated on data and statistical methods. By comparison, industry intelligence normally targets with a consistent group of metrics to both measure past operation and direct firm preparation, which is also centered on data and statistical strategies.

Scope and Applications of Business Analytics:

Today, with all the changing technology and also the ambitious small business scenarios organizations want to get an easy method to focus their attention in increasing their company earnings while cutting on at the operational costs. Organizations would like to improve their operational arrangement by gaining insights into the near future.

1. Client Relationship Management: Client service and client experience are the backbone of consumer relationships. When an organization can accurately monitor and quantify customer service factors and consumer gratification, it's a lot easier to make appropriate corrections and ensure client retention. To efficiently manage customer relationships, the organization has to likewise place priorities to serve vital clients and to understand buying behaviour and customer care for various niche sections, customer profiles, products and services.

2. Inventory Management: Inventory management is essential for any business with a supply network. Incapability in Inventory management can disintegrate profitability even as incomes gain. It is necessary to efficiently manage the inventory for profit maximization and growing customer delight. Any incapability in inventory management can lead to lost revenues and increased costs. Business Intelligence tools can help companies efficiently observe Inventory levels and facilitate Inventory optimization decisions.

3. Market Analysis: Performance based data is used by market basket analysis to find association rules. This has helped in recognizing purchase models of users having bulk consumption. Investigating on such categories of users have helped companies to predict their purchasing patterns in future.

4. HR Professionals: HR specialists can utilize data to find information about the educational background of high functioning applicants, employee reduction rate, number of years of employees on service, age, gender, etc. This report can play a crucial role in the election procedure of applicants.

5. Banking: Technology is reconstructing the banking and finance industry. Thanks to the Internet and the increase of mobile devices and apps, today's economic organizations face mounting competition, increasing client demands, and the need for strict control and risk management in a profoundly changing market. Before allowing a loan, banks have to assess the borrower's ability to repay the loan. Business analytics helps in examining past data and predict how valuable a candidate's asset will likely be in the future.

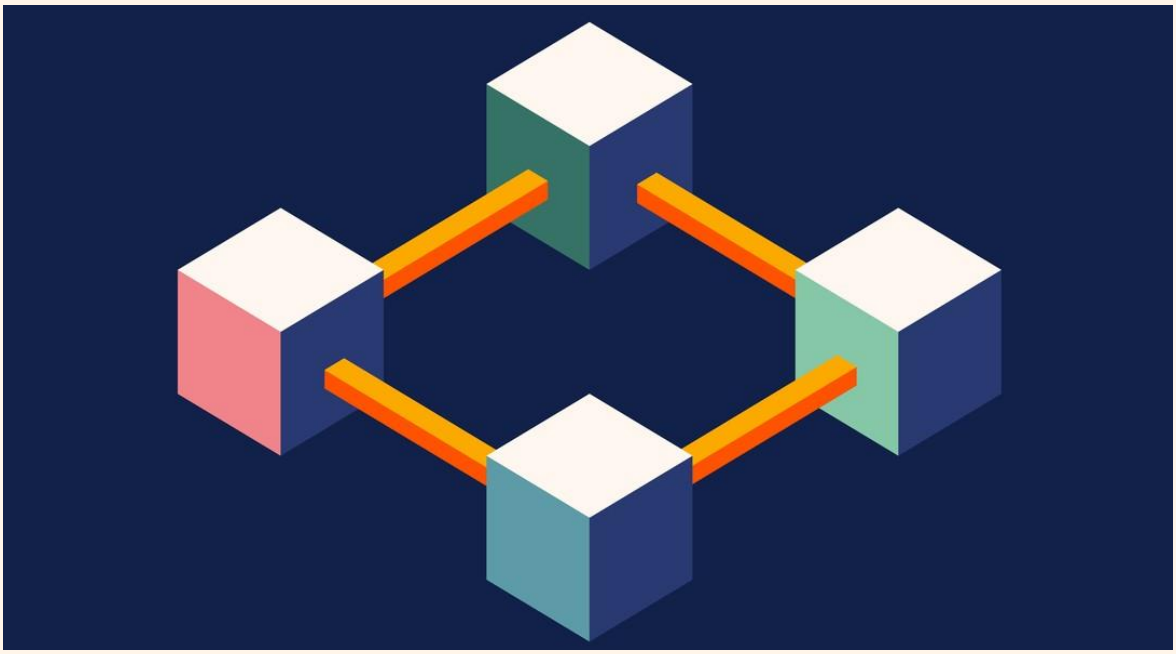
Future of Business Analytics in India:

The scope in the area of business analytics is ever growing and is improving it enhance mainstream as businesses of all sizes and analytics skill levels get into the big data game. Exploring business analytics requires the proper focus, best technology, right people, clean culture and best management promise. Companies like IBM, Cognizant, and KPMG are practicing business analytics tools and coming up with decisions that are valuable and effective. One needs to obtain an appropriate skill-set to succeed in a business analytics profession.

Inquisitiveness, interpretation skills, a thorough knowledge of tools and techniques, ability to do in-depth analysis and quantitative skills are essential to shine in the subject. Sensing the need to build a workforce that knows the area and is qualified to tackle the difficult problems related to business analytics; Indian institutes, in partnership with various premiere colleges, are allowing regular as well as executive business analytics courses. Besides the regular colleges, there are many analytics coaching institutes that are giving their own business analytics courses or are in collaboration with famous institutes. In recent times, Business Analytics has been an area of key focus in most industries. With multitude of data floating in all verticals of a business, such as marketing, sales, finance, social media, etc., it becomes essential to analyze and understand the data to make better business decisions and market development.

Business Analytics (BA) describes the skills, technologies, practices for constant pragmatic investigation and analysis of previous business performance to gain insight and drive industry preparation. Company analytics focuses on developing new insights and comprehension of firm operation predicated on data and statistical methods. By comparison, industry intelligence normally targets with a consistent group of metrics to both measure past operation and direct firm preparation, which is also centered on data and statistical strategies.

Why blockchain can be regarded as permanent solution to the education system?



The education system and its components

An education system is interrelation of some very complex processes involving many external entities to work with e.g., prospects, students, government, educational institutes, recruiters etc. The more the number of external entities the bigger is the business network and therefore more complicated becomes its operation. The entities in such an education system will be connected through various rules and regulations. For example, a prospective student will be enquiring about various courses by providing her details like educational qualification, area of interest and will be getting an appropriate response from the system. The prospect will be able to evaluate various alternative before taking a programmer or course of her choice. A student will be paying the fees and will be able to take up the courses, write examinations, use various resources of the university like the hostel, food court, transportation, library etc. The employers will be able to see the students' profile and will be able to select a candidate for job interview. The government will bring the rules and regulation and the educational institute will be able to adjust its rules and regulations according to the government policies. This depicts lot of interactions that happens between the parties in any typical system of education.

Within this hypothetical education system, a lot of documents are created, modified, deleted and circulated to different parties involved. As a result, a lot of redundant data is generated and stored either in the form of paper or in the form of electronic document. For example, a student while taking the admission presents her credentials which are verified and then checked by the institutions, a recruiter while recruiting a student needs to check the same verified credentials once again. Clearly this creates lot of duplicate data and requires a lot of storage space unnecessarily and obviously wastes lot of time as well.

Moreover, though the operation of this interlinked organizations can be understood conceptually but in reality, the organizations of the education system network work in silos. Which also implies lack of trust between the business entities is a major issue in the education system. As a result, forgery happens, and huge number of resources are spent for verification at each level. Again, manual verification cannot be regarded as reliable as technology enabled verification system, especially when the amount of these documents is huge for an emerging economy like India. This kind of an education information system will not ensure operational efficiency because there will be issues related to data consistency, data quality and data authenticity.

The number of student record is virtually endless and therefore verifying and checking them is time consuming. For example between 2018-19 to 2020-21 the Central Board of Secondary Education (CBSE) has given 9760703 certificates. The task is repetitive in nature and the outcome involves a lot of responsibility on the checkers' side.

Blockchain as a solution to mitigate the problems

"The most promising use case for blockchain in higher education is to transform the record keeping of degrees, certificates and diplomas."
Using blockchain to issue of diplomas and certificates brings radical change in the verification process. Students can own and management their academic achievements and can share them when and where those are needed, thereby reducing the pressure on the universities also as a controller and storehouse of all students' records. This new process makes hiring easier for the recruiters instead of asking the issuing institution to certify a paper copy of a potential hire's diploma they can only get a link to the digital version of the same. The process also makes the data tamperproof which is the inherent characteristic of blockchain achieved via hashing mechanism.

Additional benefits

With this technology the university's curriculum can be managed in an efficient way. An instructor could programme lessons and courses into blockchain, set up assignments for the students where blockchain can verify the completion of the job and can trigger the next assignment. The questions, answers and the evaluation can be coded into smart contract and scores can permanently be part of the student's record. This will make the system transparent for students, evaluators, recruiters and also to the regulator of the education system of a country.
The system can be linked with the financial institutions for education loans and fee payments by the students. Several universities in the U.S. and abroad have begun accepting cryptocurrency as tuition fee payment as well.
Even the teacher researchers can monitor the citation of their research work if research paper related data can be roped in the blockchain network.

Blockchain Technology implemented in education

Blockcerts

Blockcerts is an open standard for creating, issuing, viewing, and verifying blockchain-based certificates. These digital records are registered on a blockchain, cryptographically signed, tamper-proof, and shareable. The goal is to enable a wave of innovation that gives individuals the capacity to possess and share their own official records. The initial design was based on prototypes developed at the MIT Media Lab and by Learning Machine, now Hyland Credentials.

APPII

APPII was founded in March 2016 by Gary McKay, Brian McNulty and Adi Ben-Ari. APPII is latin for farsighted. They imagined a world where an individual's day to day use of personal information, be it for a job, a career, travel or finances is made significantly easier if their data has been verified.

Gilgamesh Platform

Gilgamesh is a knowledge-sharing social platform powered by Ethereum smart contracts and blockchain technology. The network shifts the way readers, critics, and authors communicate and connect with one another. Using the Gilgamesh platform, users can gain and transfer knowledge in a protected environment that encourages widespread learning and education, and incentivizes the human race to become more thoughtful and information-centric.

Disciplina

DISCIPLINA is a multifunctional blockchain for projects in the educational and recruiting spheres. It provides the transparency of work and creates conditions of maintaining confidentiality and reliability of information added by system participants. DISCIPLINA doesn't use any other blockchains in its work, and is being developed for the demands of the educational and recruiting fields, taking into account the specificity of their work.

Academic {BlockChain} Documents (ABCD)

CBSE in technical collaboration with National Informatics Centre, Ministry of Electronics and Information Technology (MeitY), Govt of India has come up with a solution using Blockchain Technology named as "Academic {BlockChain} Documents (ABCD)". This Blockchain ensures that academic documents are recorded in secured and tamper proof manner. These academic documents are accessed online by any one in trusted and verifiable manner.