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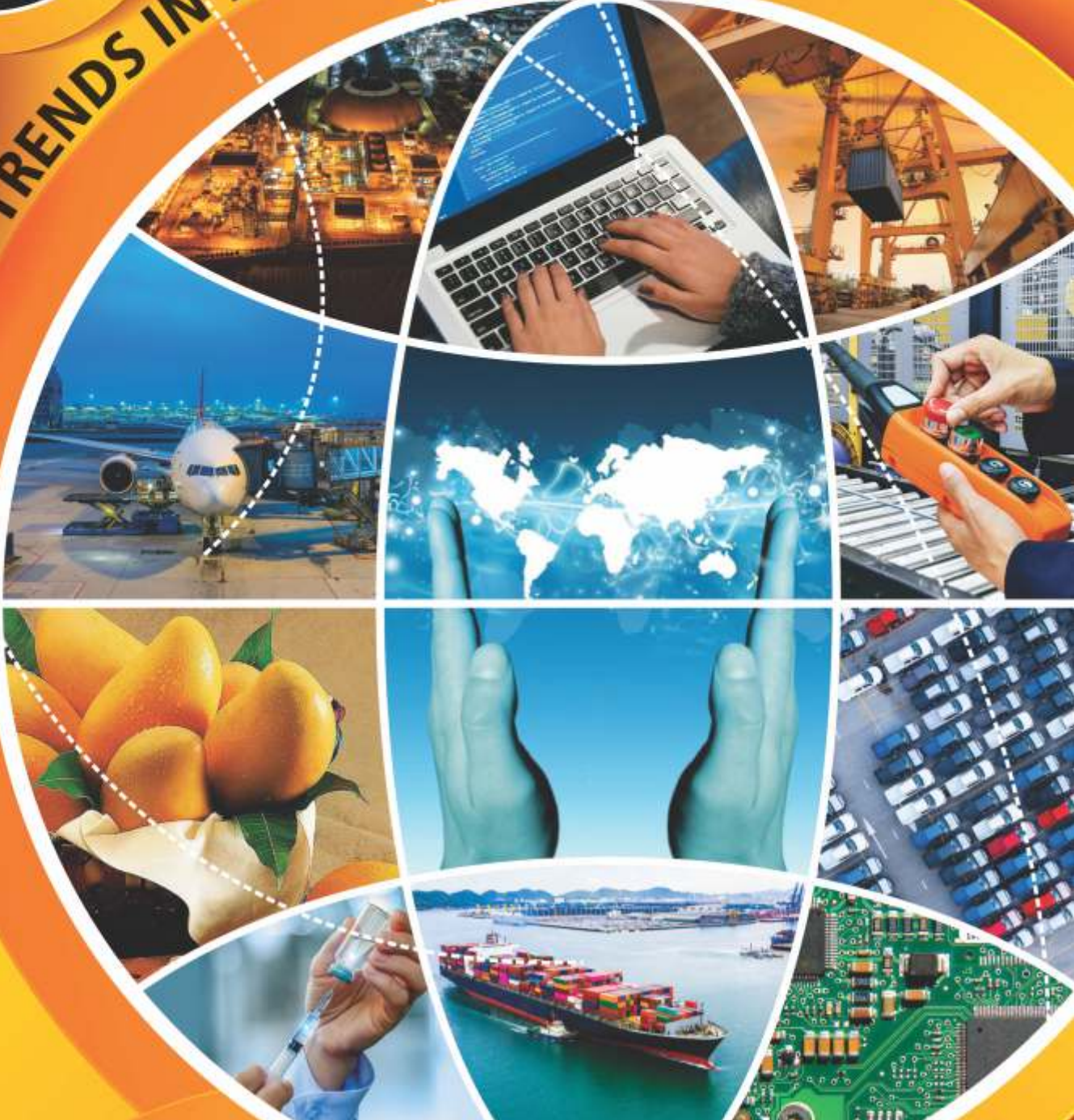
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# SAMPADA

# संपदा



## EMERGING TRENDS IN INTERNATIONAL BUSINESS





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## Editorial



I am really delighted to present to you the March 2020 issue of Sampada.

This is the 75<sup>th</sup> year of the magazine and this particular issue is filled with extensive coverage of some of our prestigious events organised in recent months.

We had organised this year's **Leadership Summit** which provided a wide array of stimulating thoughts to the participants about navigating in Turbulent times. **Mr. Sanjiv Bajaj**, Managing Director and CEO, Bajaj Finserv was the Chief Guest at this important event. A galaxy of business leaders from across the sectors and generations presented their stories about the exciting journeys of their conglomerates.

We had the privilege to hold the **National Level MSME Expo and Vendor Development Programme** which was patronised by MSME Development Institute - Government of India. This provided opportunity to the MSMEs from Electric Vehicle components, Advance Manufacturing Solutions, Defence Supplies, Innovative Products and a significant number of Women Entrepreneurs from various segments to showcase their Products and services to a large number of business visitors. During the Expo we had organised many Concurrent business sessions on various topics which are most relevant to the MSMEs.

Recently, the Chamber had organised **Defence Indigenisation Conclave** designed to give a glimpse of the present and emerging opportunities in the Defence sector to the Indian MSMEs. **Lt. Gen. SS Hasabnis** PVSM, VSM, ADC, Chief of Army Staff (P&S) was the Chief Guest at this important event.

In early February 2020 we had organised the **Industry 4.0 Summit**. This brought together many experts from India and around the world to demystify the Industry 4.0. We also showcased the capabilities of Industry 4.0 Summit. We had the privilege to host Dr. Kareem Yusuf - General Manager at IBM was the Keynote Speaker on this occasion. Ms. Theresa Schopper, Minister from Baden Württemberg State and several high level delegates from Germany and experts from UK and India as speakers at this Summit.

MCCIA had supported in organising the **Asia Economic Dialogue** organised by Ministry of External Affairs - Government of India and Pune International Centre in the last week of February 2020.

All these events received excellent response from the participants representing MCCIA's members and business community at large.

This issue of Sampada is focused on **International Business** to synchronise with MCCIA's first ever **Pune International Business Summit** in the first week of March 2020. This is our maiden effort to project Pune as the prominent location for investments and International Business. Like many of our flagship events we would like to make it bigger over the next few years.

In addition we have also included articles focused on **Data** aspects by profiling some of the prestigious organisations and companies which are a continuation of our Series. It also has many articles that could be of interest to Sampada's readers.

As always we are keen to know your impressions about this issue. Please send your feedback on [sampada@mcciapune.com](mailto:sampada@mcciapune.com)

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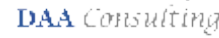
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# Serum Institute of India Success Journey

**P. C. Nambiar**

Soli A. Poonawalla along with Dr. C. S. Balakrishnan, who was a Consultant Veterinarian to the Poonawalla Stud Farms, one day made a chance suggestion to Cyrus that instead of donating horses to Haffkine Institute to make Tetanus and Anti Venom Serum, why doesn't he himself put up a small serum processing plant in one corner of the Stud Farm lands? Cyrus, who was searching for start-up for a business that would deal with the masses, rather than the traditional horse breeding and racing, accepted the suggestion and that's how the fascinating idea of Serum Institute was conceived.

Thereafter Cyrus shared this concept with his family doctor, Dr. Jal Mehta, who liked the idea very much and straight away both of them approached Dr. P. M. Wagle (former Director of Haffkine Institute), who readily agreed to be a Chief Consultant. Dr. Wagle who was very well-known in the field of sera and vaccines, in turn took Cyrus and team to Haffkine, Parel, Bombay, where he introduced them to Mr. P. K. Sholapurwala, then Assistant Director of Haffkine Institute, who in turn introduced Cyrus and team to various Scientists such as Dr. M. B. Borkar, Dr. Habbu and Mr. Hadap to start with, who all agreed to assist and later on joined Serum Institute. All of them were very enthusiastic and unselfish in their contribution with a vision that this project could become a national asset in the best interest of saving lives by producing life-saving drugs which were hitherto in short supply in the country.

## **Humble beginning**

On 12th October 1967, the Dussehra day, Serum's Dr. Pimpalkhare performed the first inoculation of the horses for the manufacture of Anti Tetanus Serum (ATS). In July 1968, Serum's first sale of Anti Tetanus Serum was made, when this ATS in a trunk was transported by Cyrus in Deccan Queen train (to save packaging and freight) and delivered to a

stockist M/s. P. Ramanlal and Co., Princess Street, Bombay, who was subsequently the first stockist of Serum's products. Although at that time, Anti Tetanus Serum was in acute shortage and in black market, the Poonawallas never took advantage of the situation. Perhaps this altruistic feeling blessed the company to greater heights as SII grew from strength to strength.

Thus, the fascinating journey commenced by a horse racing family to production of life-saving biologicals, starting with Anti Tetanus Serum and then moving towards Tetanus Toxoid and other vaccines from a very humble beginning as a small scale industry.

With the guidance of a small team of Scientists, Dr. P. M. Wagle, Dr. M. K. Habbu and Dr. M. B. Borkar, Cyrus was successful in launching the DPT vaccine, which was again in great shortage in the country, at the price of a cup of tea.

## **Uphill Task**

With very little financial and political muscle power, there was a huge non-cooperation from the Central Government to accept SII's DPT vaccine in the EPI programme and the request fell on deaf ears. It was then the Union Health Minister, Shri R. K. Khadilkar supported SII's efforts for production of indigenous vaccine. A great struggle took place, after which the cursed bureaucrats in Delhi accepted the idea [this was in 1970's when SII was in its nascent stage] and that is how the production and supply of DPT vaccine grew gradually to national levels. Cyrus recalls that in those days planning and electricity permission from the non-cooperative Government Officials was a major challenge and that thwarted the rapid growth of SII for years.

## **Innovation and path breaking technology**

Dr. Jal Mehta with Dr. J. Loker brought on the table the news of technology of adapting the IBM

Blood Cell separator to replace the traditional bleeding of equines, which is more productive and less painful to the animals. Cyrus being a horse lover immediately went to London to study and absorb the technology at the Great Ormond Street Hospital in London. This technology of painless plasmapheresis in equines using the Continuous Blood Cell Separator was a major breakthrough, wherein the plasma was extracted immediately and the RBCs, WBCs and platelets were given back to the animals immediately in a painless and humane manner. This unique technology which was scientifically implemented for the first time in the world culminated in Cyrus getting the Doctorate from Pune University.

### Landmark Pre-qualification by WHO

On 15th February 1993, SII became the first vaccine manufacturer in the developing world to have received the Pre-qualification by WHO, after great efforts and struggle – thanks to the untiring efforts of Dr. Jal Mehta and other Directors and Scientists of SII. This involved Herculean task of improved standards of GMP required by WHO for pre-qualification of the vaccines, starting with Measles vaccine. This in fact was the turning point of SII's fortunes. Today SII has more than 22 vaccines pre-qualified by WHO which has enabled the company to grow to 1.5 billion doses of vaccines provided in 160 countries worldwide. Another 10 countries were added, making SII's total to 170 countries, with the acquisition of Bilthoven Biologicals in The Netherlands for supply of Polio and BCG vaccines. Thereafter several first in the field of vaccine amongst the developing Nations were notched by SII.

### MenAfrivac

SII undertook the development and production of this much needed vaccine in joint venture

with the support of Bill & Melinda Gates Foundation and PATH (Program for Appropriate Technology in Health). The philanthropic policy followed by SII committed to manufacture and supply this vaccine at a price of 42 cents a dose compared to \$4 per dose which was hitherto prevalent, and supplied by European Multi-national Companies. This was achieved, thanks to the efforts of Dr. S. V. Kapre, Dr. S. S. Jadhav and Dr. Marc LaForce.

### Sabin Humanitarian Award and the Sabin Global Corporate Philanthropy award

SII's contribution in the America was recognized when Cyrus received the Sabin Humanitarian Award and the Sabin Global Corporate Philanthropy Award in 2005. This finally led to the elimination of Measles / Rubella disease in America.

### A path-breaking acquisition - Bithoven Biologicals, Netherlands

In 2012, SII acquired Bilthoven Biologicals in The Netherlands – its first overseas acquisition to add Injectable Polio Vaccine to its portfolio which was the only one vaccine in the global immunization basket that was missing.



#### Doctor of Science, Honoris Causa award

Dr. Cyrus S. Poonawalla was conferred with the prestigious 'Degree of Doctor of Science, honoris causa' by the University of Oxford, U.K. on 26th June 2019. The University conferred the honorary degree during a ceremony called 'Encaenia'. He is the only person after Edward Jenner (1813) who has received Oxford 'Doctor of Science, Honoris Causa' in the field of Vaccinology (statue of Edward Jenner at Jenner Institute, Oxford on the background).

# Milestones over 5 decades

- |             |   |
|-------------|---|
| <b>1967</b> | Operations began with manufacture of <b>Tetanus Antitoxin</b> followed by <b>Tetanus Toxoid</b>   |
| <b>1974</b> | Commenced production of <b>DTP Vaccine</b>  |
| <b>1981</b> | Launched <b>Polyvalent Anti-Snake Venom Serum (Asia)</b>  |
| <b>1989</b> | Launched <b>Measles Vaccine (M-VAC)</b>   |
| <b>1991</b> | Launched <b>Polyvalent Anti-Snake Venom Serum (Africa)</b>  |
| <b>1993</b> | First vaccine Pre-qualified by World Health Organization ( <b>WHO</b> ) and launch of <b>MMR Vaccine (TRESIVAC)</b>   |
| <b>2001</b> | Launched <b>Hepatitis B Vaccine (rDNA ) (GENEVAC B)</b>   |
| <b>2002</b> | Launched <b>BCG Vaccine (Sii TUBERVAC)</b>  |
| <b>2004</b> | Launched the world's only <b>adsorbed liquid HDC Rabies Vaccine (Sii RABIVAX)</b>   |
| <b>2005</b> | Launched <b>DTP-HepB Combination Vaccine (Q-VAC)</b>  |
| <b>2007</b> | Launched <b>Hib Vaccine (HibPRO)</b> and BCG Vaccine for Bladder Cancer ( <b>ONCO-BCG</b> )   |
| <b>2008</b> | Launched combi-pack of <b>Pentavalent Vaccine (DTP-HepB+Hib) (PENTAVAC)</b> and <b>Quadrivalent Vaccine (DTP+Hib) (QUADROVAX)</b>   |
| <b>2009</b> | Launched <b>liquid Pentavalent Vaccine (DTP-HepB-Hib) (PENTAVAC SD/PFS)</b>   |
| <b>2010</b> | Launched H1N1 Influenza Vaccine ( <b>NASOVAC</b> ), H1N1 Influenza Vaccine inactivated ( <b>ENZAVAC</b> ), Meningococcal A Conjugate Vaccine ( <b>MenAfriVac</b> ) and r-HuEPO ( <b>REPOITIN</b> )                                |
| <b>2011</b> | Launched inactivated polio vaccine ( <b>POLIOVAC PFS</b> )  |
| <b>2012</b> | Made first overseas acquisition, <b>Bilthoven Biologicals, Netherlands</b> Launched Trivalent seasonal influenza vaccine ( <b>NASOVAC-S</b> )   |
| <b>2014</b> | Launched Oral Polio Vaccine ( <b>OPV</b> )  |
| <b>2017</b> | Launched first thermostable <b>Rotavirus Vaccine (ROTASIIL)</b> . Launched World's first Rabies Human Monoclonal antibody, recombinant ( <b>RABISHIELD</b> ). Launched Rabies Vaccine Human I.P. ( <b>RABIVAX-S</b> ), Vero-cell. |
| <b>2019</b> | <b>Inauguration of New Poonawalla Bio-tech plant at Manjari, Pune</b> with State-of-Art GMP compliant facilities.   |
| <b>2020</b> | Received Pre-Qualification from WHO for Pneumococcal Polysaccharide Conjugate Vaccine ( <b>Pneumosil</b> ). Launched fully liquid pentavalent Rotavirus Vaccine ( <b>Rotasiil Liquid</b> ).                                       |



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# “What takes you here won't take you there” – Let's find a new way to beat rivals.

Suvodip Sen



One of “The Way Forward for Success of International Business” is to beat the competitors.

The most challenging part of International Business is business is being done on foreign soil which is not familiar to incumbent. As a result, lot of challenges or roadblocks like cultural issues, political dilemma, economic turmoil and on the top of it the existing competitors already present in the market. Business entities are definitely doing lots of research to get actual information. But information or data would not be sufficient unless proper action or strategy is formulated. The million-dollar question is how to get sustainable competitive strategy? This article focuses only on certain framework to create excellent competitive strategy for conducting

business on foreign soil as well as on domestic soil too.

Firstly, what is the strategy all about? In today's context one of the most popular buzzword in business world is “strategy” which means certain activities to get ahead of competition. The term 'Strategy' is highly associated with military activity where headquarter gives command and front-line troops attack enemies either to regain their land or to invade enemy's territory. Similarly, in today's industry scenario, most of the companies deploy their resources to outperform their business rivals. In fact, whole focus is lying on the fact that how firms can acquire or build resources and internal capabilities to snatch the pie from competitors. But there is retaliation from rivals also. This retaliation can be in the form of price war, poaching top performers, negative

publicity or may be in other forms. Finally, this kind of retaliation mainly leads to commoditization of product and services i.e. customers are only bothered about price only and generally do not look for value. To counter the competitor's strategy, firms often shift their whole focus on product or service differentiation strategy and low-cost pricing strategy. Some firms may try to provide higher quality services at lower price to retain existing customers or to attract newer customers. Unfortunately providing higher quality products & services at lower price is not sustainable in long run and firms must come back to their old pricing or eventually start bleeding. Sometimes, a firm introduces a new product which cannibalizes firm's other products also.

But what is the way out? From academicians to industry leaders are searching for the answers. To find the answers to this question we can start with another question – 'How many different types of businesses or industries do exist today, but did not exist 100 years back?' If we ask the same question with reduced the time horizon of 50 years or even 20 years, the answer we will get is astonishing. Hence, the answer is to create new uncontested market place and to create competition irrelevant, which is called Blue Ocean. Another question may strengthen the above argument – 'How many companies once enjoyed higher market share, monopoly power 50 years back and did not exist today?' It is quite obvious that all those firms which cease to exist today definitely used some competitive strategies but failed. The reasons could be they all tried to fight within the market boundary, engaged in price war which made the ocean bloody which is known as Red Ocean.

In red oceans, firms often try to intrude competitor's space and try to grab the share of pie as much as possible instead of trying to make the size of pie bigger. In case of red ocean, it is assumed that firms are forced to compete within a given industry structure which is defined as structuralist view or environmental determinism. But for Blue Ocean, firms can think of beyond the market boundary and assume no industry structure is given. In Red Ocean, firms' actions are significantly dependent on competitor's action opposed to Blue Ocean strategy where firms do not look at competition to formulate their strategy.

What could be some quick answers to so called successful competitive strategy? Most probably some most used terms like value creation, innovation, diversification, new product development etc. Apparently, these strategies were successful in some contexts, but we must reconsider their own pitfalls before executing them for different business. For example, if a firm takes a new strategy in creating value for its customers which eventually results in incremental sales can easily be copied by competitors also. Sometimes breakthrough innovation may be thought of as a good competitive strategy, but may not be commercially viable. Also, sometimes innovative products are too ahead of time to be accepted by the consumers. Moving into different markets or different businesses do not guarantee an uncontested market place and firms will again put themselves in Red Ocean whereas target is to create competition irrelevant. In low cost strategy or differential strategy, firms try to make a trade-off between value and cost but in Blue Ocean, firms create higher value at lower cost which is termed as Value Innovation.

Value Innovation is the corner stone of Blue Ocean Strategy which defies generally accepted notional of red ocean competitive strategy. In Value

Innovation, firms give equal weight on both value and innovation. Earlier, we have already discussed the pitfalls of value creation or innovation happened alone.

Strategy gives opportunity to gain higher profit margin, higher market share, sales growth but not in a risk freeway. Be it Red Ocean or Blue Ocean, every strategy has its own risk which may be in terms of timing, context or market place. Since, there is no database is maintained, it is difficult to tell how many companies initiated Blue Ocean strategies in last two to three decades and how many were successful. A short study of 108 companies showed that out of 108 companies eighty six percent initiated red ocean strategy in the form of line extensions accounted sixty two percent of overall revenue and thirty nine percent of overall. But remaining 14 percent company those initiated blue ocean strategy generated 38 percent and 61 percent of total revenues and profits respectively.

#### Four Actions Frameworks

As name suggests, the company needs to take four actions to idealise and progress towards uncontested market place. The four actions are Eliminate and Create with reduction and rising. In this course, company should ask

**Eliminate** - "What are the factors are taken as granted by the industry?" Those factors need to be eliminated. But in parallel, company must offer something to create new values.

**Create** - "What are those, which have never been offered so far by this industry?" This question will open us space for value innovation, where company does not require to trade-off between quality and cost.

**Raise the standard** - "Which are the standards are to be raised above Industry standard?"

**Reduction** - "Which are standards are to be reduced below Industry standard?" For example, cost. Company may look for leaner operating model to reduce the cost and then pass on the cost benefits to the customer(s) or to attract new customers.

The above framework can give initial competitive edge to any business, but time will come when business should renew its strategy again and again to remain in competition. To do that, company must always evaluate its resources as per following parameters.

V - How valuable company's resources are? For example, brand name and brand value of a company can always help the business to expand in other country.

R - How rare company's resources are? For example, the technology innovation that gives rare comparative advantage which may not be accessed by competitors in foreign land.

I - Can the strategy be copied? Sometimes, strategy can easily be copied but same result is not obtained because of some "X" factor which is called the "Causal Ambiguity"

N - Non-substitute. Can the product and services of a company be substituted easily?

The above frame work provide the point to ponder for gaining competitive advantages which is major weapon in cross-border operation. Now, it is important to see how many weapons business entity can gather in its strategy arsenal?

-----  
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# My Business experience with importers from Germany and Poland

H. K. Mahale



I got the opportunity to go to Germany for doing business administration studies through my organization "Maharashtra State Co-op Marketing Federation" (Markfed) in the year 1968.

During the training program I noticed that Germany was importing fresh onions from Holland due to shortage of the product. On my return to India, I visited my native place, Nasik, where I saw that onion growing farmers were forced to throw their produce on the road as the onion prices in local markets were very low. They were not even recovering their transportation cost for carrying goods to local mandis.

I contacted the German consulate in Mumbai and explained the situation. I was working as a business manager of Markfed on behalf of my institution I took them for site survey to visit onion markets of Nasik, lasalgaon, khed, chakan of pune area and convinced them to place order for fresh onions, FOB Mumbai basis. They were satisfied with the quality and available quantity .Our Indian Onion prices were very low compared to the prices at which they were buying from other countries so we secured the order and they agreed to pay 80%of consignment value on loading the goods on the boat at Mumbai port and the balance 20% they would pay on receiving the goods at port of Hamburg.

As fresh onion is perishable commodity they arranged air ventilated ship for carrying about 1000 ton onion. It was a good deal since full cost of consignment at market value was fully covered in advance 80% payment. The vessel reached the destination after the period of 30-35 days .Onion being perishable around 5-10% of the stock got bad before it reached the port. Government authorities informed us to send a representative to do joint inspection of the stock for clearing balance payment. Sending our representing would have incurred additional expenses. Through mutual consent both parties agreed and it was decided that we would take on 10% of the balance 20%payment.

This experience was challenging but we still managed to find a way out and were successful. This boosted my confidence for developing export business of agricultural commodity. Subsequently after my retirement I started agro commodity export business on partnership basis and exported special Salem variety of turmeric from Sangli to German Company through their agent M/sHelmuthGholke. They were very satisfied with the produce, which was used for medicinal purpose and we often got repeat orders. Once the said buyer urgently required 10 tons of the same quality turmeric finger with 7.5%curcumina and requested to

dispatch it by air from Mumbai to Berlin on freight to pay basis, which means they agreed to pay the high cost of air transport. This was my unique experience, which affirmed that people ,globally are ready to pay if we abide by good quality produce.

After visiting Anuga food fair in Colongel subsequently exported Alphanso mangoes by air to Berlin. Similarly I also developed contacts with French buyers after attending Sial, Paris fair and supplied them spices namely turmeric and fenugreek. Even now through our associate member we are exporting spices to France.

For Poland, I got oppoutinty to attend Warsaw world trade fair and visited nearby markets and processing unit of spices and fruits viz namely Zelopex of Kalisz and Dawtona and secured orders for our spices products. The importers deputed their purchase manger to our Indian local market to check the quality and quantity and packaging at procurement center. After their satisfaction they continued to place order for turmeric powder and crushed red chillies.

The Poland buyer preferred medium quality turmeric powder and turmeric finger of lemon colour variety and German buyer always preferred good quality Salem Variety.

I would definitely encourage new entrepreneurs to venture into exporting our agro commodities. The need is to do thorough market research to find good suppliers and abide by the quality.

To find markets I would encourage them to visit trade fairs. There is high demand we need to tap it make sincere hard efforts to keep up India's name in global market.

-----  
H. K. Mahale  
Susheel Consultants, Pune

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# Exhibitors at Pune International Business Summit 2020

## STOROPACK : Perfect Protective Packaging

Storopack is a specialist in protective packaging and technical molded parts. As a global, family-run company, tradition and innovation play a key role in everything we do. Our aim is to offer customers the perfect protective packaging solution and support them over the long term – this idea is what shapes our daily activities.

The Packaging division offers flexible protective packaging with air cushions, paper pads, PU foam packaging systems, loose-fill packaging materials, and their integration into existing packaging processes.

With certified production facilities and locations around the world, Storopack has a decentralized structure and is always in close proximity to the customer. 2,520 employees work at 66 locations in 18 countries around the world and our products are available in more than 50 countries. As a global,



family-run company, we're aware of our responsibility towards society and the economy and not only want to assume it, but also actively help shape it. Our Vision & Guidelines form the basis of our activities.

The Packaging division offers flexible protective packaging with air cushions (AIRplus®), paper pads (PAPERplus®), PU foam packaging (FOAMplus®), and loose-fill packaging materials (PELSPAN® and PELSPAN® BIO). Comprehensive analysis of existing packaging processes that takes into account the aspects of speed and flexibility as well as ergonomics, efficiency, and efficacy at the packaging workstation (Working



Comfort®) allows us to provide our customers with equipment based on their needs.

Whether individual packaging workstations or complete packaging lines, manual, semiautomatic, or fully automatic packaging systems – our application engineers are always optimizing the protective packaging process, so we can offer customers the optimal solution at all times. The Packaging division is represented with locations in Europe, North America, South America, Asia, and Australia, and the products are available in over 40 countries.

## CADTECH Engineering Solutions Pvt. Ltd.

### About Managing Director:

Mr. Divakara Rao is the founder and Managing Director of CADTECH Engineering Solutions Pvt. Ltd., He has 25+ years of Techno – Commercial expertise helping to lead and sustain CADTECH with an intension of establishing best Engineering services company blended with latest Manufacturing technologies and processes.

With an existing family owned Manufacturing Tool Room, the adulthood passion for automobiles and a degree in Mechanical Engineering contributed to we building a world class **State-of-Art Automotive Design House** in Pune, India in **2002**. Industries we cater are **Automobile & Transportation, Industrial Machinery, Heavy Engineering and Off Highway**. Our facility in Pune consists of **120 +** strongly skilled engineers with expertise across different engineering domains. During the span of **18 +** years CADTECH has



successfully developed synergies with known Industry **OEM's** and **Tier 1** suppliers to provide cost effective engineering support. For **CADTECH** along with being cost effective, quality output is the key to the entire engagement. Our value proposition is not just being cost effective but being a business partner who has literally walked into your shoes. As a supplier we try to scrutinize the opportunity and prepare a business plan to justify how



only CADTECH can help you compared to other engineering suppliers.

Since **2002** CADTECH has grown with both age and experience to understand the peaks and valleys of this industry. Our existence and survival in this strongly competitive industry itself defines the value we bring to customers. With plans of expansion and to set its footprint in the **International Market** CADTECH acquired **HEI Design Center Pvt. Ltd. (A HEMA Group Company)** in 2016 which now caters to **International Geographies like Europe, North America, Middle East**. We invite you to visit CADTECH Group to understand more about our engineer-

ing capabilities and explore our business plans to form a win-win synergy for both the parties.

About CADTECH:

**CADTECH Engineering Solutions Pvt. Ltd.** is a growing Global Engineering Services company established in **2002**, based in Pune. We offer customized end to end **Product Engineering & Manufacturing Engineering** solutions specific to customer needs of various industries –Automotive & Transportation, Off Highway, Aerospace, Consumer Durable and Medical Devices.

Our Services Offering:

**Product Engineering Services:**

New Product Design and Development - Concept to Reality of Automotive and Non-Automotive Products.

Automotive Interiors & Exteriors - Interiors & Exteriors Components, BIW & Body Closures, Overhead Systems, Seating Systems, Exhaust System, Engine & Power Train systems, CAE and Proto Development.

**Manufacturing Engineering Services:**

BIW Welding Fixtures & Grippers, Co2 Welding Fixtures, Checking Fixtures, Material Handling Equip-

ment's, Sheet Metal Dies, Press Tools, Injection Moulds, Blow Moulds, Forming Tools Design and Manufacturing etc

**CAE Services:** Meshing, Linear static Analysis, Non-linear static Analysis, Dynamic Analysis.

Contact Us:

**CADTECH Engineering Solutions Pvt. Ltd.**

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www.cadtechgroup.com

In 1969, we started as RAMESH AND COMPANY, based out of a little shop in Narayan Peth, Pune, selling thinners and paint. Over the course of time, we moved to a factory plot in MIDC, Chinchwad to begin manufacturing our first set of thinners and paints. As the years rolled by, paints came and went, yet thinners did not let us evaporate.

Post the year 2000, as we entered a new world of stringent environmental norms, human safety and a lengthening list of banned chemicals, we began our development of a new family of products. These products would aim to be eco-friendly, human safe and free from harmful chemicals. For the next 15 years, we spent our time designing and

researching new ways to solve old problems. Customers came to us with wishes that we worked hard to fulfil.

And then came 2016, the year when we realised that we had changed. In our race to bring the best new solutions to a new world, our operations had evolved, our team was stronger, more technical, more competent. Our production systems were superior and our core values had metamorphosed from a company that not only delivers, but also a company that cares. We were no more, simply a name. We were a force of change. We were an energy that manifested itself whenever a problem was mixed with a need for improvement. And this energy to make things better, safer, easier, needed no catalyst. From component degreasing to corrosion



management, bio-based machining fluids to niche speciality products, there was no looking back.

It was exergonic!

Today, in 2020, as we stand with 50 of our best years behind us, we at EXERGON, believe there is more. We envision a world where water can be used economically, where wastage can be controlled, where prices need not be debilitating and where chemicals need not be harmful. We, at EXERGON, believe that change is possible.

InnovaPoint is helping factories to unlock the immense potential they always had but never knew about it or didn't have the ways to realize it.

For last 15 years InnovaPoint has been helping clients in solving their problems with technology enabled solutions. Automotive and manufacturing is our key focus areas. We have consciously developed our capabilities in specific areas within the manufacturing; Machine Shops, Foundries, Automotive Components, just to name a few. Having delivered various type of solutions from customer portal, e-commerce etc. to some mission critical software like "sf-Hawk", we are still hungry to learn more and add more value in our client's business.



sf-Hawk is a Industry 4.0 based software and hardware framework that allows machines, equipment, sensors, gauges etc. to come online and share their real time data. Using this data, sf-Hawk provides real time analytics, allowing factories to become proactive, efficient and competitive. It helps clients improve OEE, reduce cost, improve quality and improve overall Machine Shop Efficiency. This product can be configured to suit Machine shops, Foundries, Press shops, and many more areas. IoT (Internet of Things) and Artificial Intelligence are the key pillars of sf-Hawk.



Our quality policy: Continuous Improvement, Consistent Quality and Ethical work practices are the key measures of InnovaPoint to attain complete customer satisfaction and maintain long lasting customer relationship.



**ASIA AUTOMATION PVT. LTD.** stands out distinctly in the field of **AUTOMATION & CONTROL** in India & offers indigenous solutions in the Hi-Tech field.

The company was founded by highly qualified I.I.T. engineers, Mr. Shirish Mujumdar and Mr. Ravindra Gokhale in 1991 after working with M/s TELCO (TATA Motors), Pune in the machine tool and electronics field for about 10 years.

Asia Automation's strength lies in **Design, Development & Manufacturing of embedded controllers** with ARM Processors & software solutions with “.Net, JAVA, VC++, Python,

RDBMS, Labview & cloud based software solutions”.

Asia Automation Pvt. Ltd. manufactures and exports wide range of automation & control products like • PLCs • Position Controllers • Data Loggers • Battery Management Systems • Textile – Weaving & Electronic Jacquard • Remote monitoring with GPS, GSM-GPRS & RFID, • Plant Monitoring (OEE) - cloud based technology.

**We provide automation solution for :-**

- Machine Tool • Ferrous & Non Ferrous Foundry • Textile Weaving – Electronic Jacquard • Construction

Machinery • Sheet Metal • Battery Monitoring • IIOT

Company has all over India & overseas support network. Customer base includes reputed companies from all over India & overseas customers from **China, Japan, South Africa, Australia, Taiwan, Indonesia, Philippines & U.A.E.**

Asia Automation Pvt. Ltd.  
22, Pragati Complex, Kothrud Indl. Area, Kothrud, Pune 411029, India  
**Directors** : Shirish Mujumdar & Ravindra Gokhale  
**E-mail:** sales@asiaautomation.com  
**Website:** www.asiaautomation.com



Distillery, F&B, Transmission & Distribution, Utilities, Material handling, IBMS & Industrial Security etc.

We focus & invest lot on skill set enhancement of the people. We have process centric approach for all the activities we do. We make the processes, standardize & sustain them. “Customer above all” is our core value which consistently motivates us to take efforts to create satisfied customer base by meeting their requirements in terms Quality, Delivery & Cost. We believe that we can contribute

towards stepping stone of success of our clients. We have strong growth plan to expand the business portfolio on various domains, platforms & territory and we are working hard to accomplish our vision – “We aspire to be the most preferred organization by all stake holder with 500 Projects and 5000 employees and operation in India & overseas by 2025.”

**Company Description –**

Virtuoso Projects & Engineers Pvt. Ltd. is ISO 9001:2015 certified company, established to provide engineering services & execute turnkey projects in Automation, Electrical, Instrumentation domain since 2011. The services rendered by Virtuoso can cover a project in its entirety from Front End Engineering Design to site acceptance on various domain like Oil & Gas, Chemical, Power, Pharmaceutical, Sugar,

**SOAR RENEWABLE ENERGY PRIVATE LIMITED**

Soar Renewable Energy Pvt Ltd. is a leading manufacturer of Lithium Battery Packs from the year 2016 with well equipped production and supplied

Lithium Batteries for various applications in EV (Electric Vehicle), Solar, ESS (Energy Storage System), and Telecommunication Sector.

Soar has its own assembly line for lithium cell manufacturing in China.

Soar team has also developed inhouse BMS for Lithium Battery Packs. Soar has vision of building complete cluster for Lithium Battery Pack Manufacturing Industry in India.



“Khed City is India's emerging smart industrial city being established near Chakan, Pune. It combines concepts of industry integration, smart cities and self-sustainable development.

This integrated city will enable profitable manufacturing with a plug and play infrastructure for industrial units. Khed City is modeled on a walk-to-work

culture and aims to provide a high quality of life for the people who work and live in Khed City by providing superior social, entertainment and educational facilities.”

**Khed Economic Infrastructure Private Ltd.**

Level 4, Amar Avinash Corporate Plaza, Bund Garden Road, Pune 411001, Maharashtra, India.  
www.khedcity.com

**MCCIA Electronic Cluster Foundation (MECF)**

**Ministry of Electronics and Information Technology (MeitY)** has announced financial assistance for setting up of Electronics Manufacturing Clusters (EMCs) for promoting Electronics System Design & Manufacturing (ESDM). In Maharashtra, Pune District has been declared as a Brownfield cluster. The scope of Brownfield cluster under EMC Scheme includes providing financial assistance for development/ up-gradation of common infrastructure and facilities to enhance the competitiveness of existing units in an area notified as a Brownfield

EMC.

**Mahratta Chamber of Commerce, Industries and Agriculture (MCCIA)**, initiated a Special Purpose Vehicle (SPV) with objective of promoting the development of EMC by setting up a Common Facility Centre (CFC) in Pune. This CFC will help the electronics industries in Pune and surrounding areas in terms of latest technology, cost competitiveness, faster turnaround time etc. enabling Pune region to become a preferred destination for electronics design led manufacturing. This will help in developing an entrepreneurial ecosystem, drive innovation and catalyse the economic growth by



increasing employment opportunities and tax revenues.

Yogesh P. Birajdar, CEO (MECF)  
MCCIA, 5th floor, International Convention Center Complex, S.B.Road, Pune 411 016

**SPA TECHNICAL ADVISOR, Shrikant**

**Athavale**, a Proprietary Consultancy Firm, for providing, Technical Know How for Research and Development and the Manufacture of Self-Adhesive Tapes, Rubber Products. Currently associated as Technical Advisor with EBRD (European Bank for Reconstruction and Development), HQ. London UK, and some Ukrainian Firms, as well as couple of Indian Firms.



I am Science Graduate (1973 Batch) from Karnataka University, Dharwad with Post Graduation in Rubber Technology, from Plastics and Rubber Institute (PRI), London. (1976 Batch). My Experience in Rubber Industry for over 11 years, and Adhesive Tape Industry for over 35 years, in Manufacturing, Production and Research and Development.

I am, Adopted Faculty for PVG's College of Engineering and Technology, (PVG COET), Pune. PVG COET has Introduced, Adhesives for Packaging as a new Subject in, Printing Technology Syllabus for BE (Printing) from Academic Year 2019-20. PVG COET is the first Institute in India to Introduce this kind of course in India.

Recently, AIPL – COE, has sought approval from, NSDC (National Skill Development Corp), Govt. of India to, Organised, an Apprentice Training for, Operators, for Coating and Converting Industry. I am associate Partner of, AIPL COE, Delhi.

I have 3 Indian Patents to my credit. I have presented couple of Technical Papers in Seminars, in PSTC (USA), ASC (USA), MKVS (Germany), Rubber Biz (Thailand) and ATMA (India).

I have Published 6 Technical Books through Notion Publishing House USA.

My company has won couple of Awards, for Biodegradable Packaging Tapes, Wall Graphic Cast Film, Innovative Pilot Coating & lamination Machine, form SIES, School of Packaging, Mumbai.

My company has setup a SPA Technical Advisor's R&D Centre, for the benefit of Adhesive Tape Manufacturers requirements of Product Development, as well as, SPA Technical Foundation, exclusively for, Skill Development of youngsters, suitable for Adhesive Tape & Rubber Industry.



# ECGC: Empowering Exports

Vishnu Khanolkar

ECGC, a premier Export Credit Agency (ECA) of Government of India (GOI) established in 1957, provides credit insurance covers to exporters against non-payment risks by the overseas buyers due to Commercial and Political reasons. It also provides insurance covers to banks against risks in export credit lending to the exporter borrowers. ECGC endeavors to support Indian Export Industry with its experience, expertise and underlying commitment to progress and advance of India's exports. ECGC promotes both Short Term (ST) exports (i.e. export realization within one year) and Medium and Long Term (MLT) exports (i.e. export realization extending over a period of more than one year).

In all, there are 19 insurance products for exporters, 11 insurance Products for banks and 12 insurance products for Medium and Long-term Exporters/Banks. Further, ECGC also provides Customized Covers to meet specific requests of exporters. It has also introduced Factoring facility to MSME Sector and cover in foreign currency to Special Economic Zone Exporters.

## Risks Covered

Broadly, under policies the commercial risks covered are insolvency of the buyer, protracted default by the buyer to pay for the goods and the failure of the buyer to accept goods subject to certain conditions. The coverage also includes default and insolvency of overseas banks that open L/C as well as losses arising on account of non payment due to discrepancies which do not materially alter the terms, subject to certain conditions.

The political risks covered are imposition of restriction on remittances

by the Government in the buyer's country or any Government action which may block or delay payment to the exporter, war, revolution or civil disturbance in the buyer's country, new import licensing restrictions or cancellation of a valid import license in the buyer's country after dispatch of goods by the exporter, cancellation of export license or imposition of new export licensing restrictions in India after the effective date of contract (under Contracts Policy) and payment of additional handling, transport or insurance charges occasioned by interruption or diversion of voyage which cannot be recovered from the buyer.

## Some of the major policies for Short Tem Covers are as follows:

- i. Shipments (Comprehensive Risks) Policy: For Exporters whose anticipated annual export turnover is more than Rs. 500 lakhs will be eligible for this Policy. This is a Standard Whole-turnover Policy wherein all shipments are required to be covered under the Policy.
- ii. Exports (Turnover) Policy: Turnover Policy is for the benefit of large exporters who contribute not less than Rs.20 lakhs per annum towards premium. The policy envisages projection of the export turnover of the policyholder for a year and the initial determination of the premium payable on that basis, subject to adjustment at the end of the year based on actual. This is a Standard Whole turnover Policy wherein all shipments are required to be covered under the Policy.
- iii. Single Buyer Exposure Policy: This policy is provided to insure exporters having a large number of shipments

to a particular buyer with simplified procedure and rationalized premium. An exporter can choose to obtain exposure based cover on a selected buyer. The cover would be against commercial and political risks. The option to exclude L/C shipment is available.

- iv. Multi-Buyer Exposure Policy: This policy is suitable for exporters who export to a large number of buyers and the number of shipments made by them is quite high. If the transaction is on L/C terms, failure of the L/C Opening Bank in respect of exports against L/C will also be covered.
- v. Small Exporters Policy: An exporter whose anticipated annual export turnover for a period of one year does not exceed Rs.500 lakhs is eligible for this Policy. This is a Standard Whole turnover declaration based Policy wherein all shipments are required to be covered under the Policy.

## ECGC's Export Factoring Facility:

Under this policy, ECGC will enter into an agreement with the exporter to purchase the export receivables without recourse and assume credit risks on the overseas buyer. If the buyer defaults, the payment for undisputed liability will be made by ECGC. This is designed for exporters who fall under the category of MSME as per MSMED Act 2006 and have minimum three years' experience in exports with good track record.

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# Can Modi Government bring back glory to India through Technology based export surge

Y. H. Gharpure



**Glorious Past of India and China** : Historically, India and China have been 2 grade ancient civilizations and from 1 AD till beginning of 15<sup>th</sup> century, they were the largest economies globally<sup>(1)</sup>. The major driver for economic growth for both was foreign trade in which both the countries were aggressive ; China with silk road and India leveraging exports through spice trade routes in Indian Ocean vide map below :



Source : [https://en.wikipedia.org/wiki/Spice\\_trade](https://en.wikipedia.org/wiki/Spice_trade)

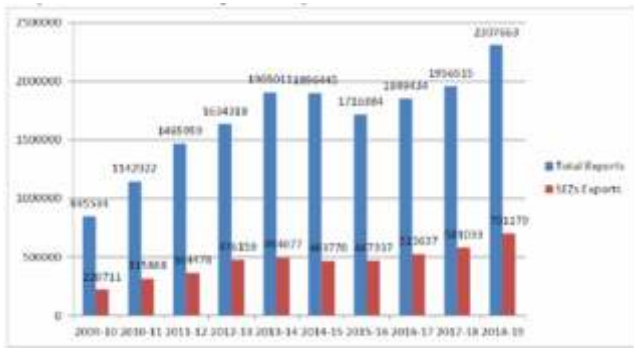
However, the economically important Silk Road (red) and spice trade routes (blue) were blocked by the Seljuk Empire c. 1090, triggering the Crusades and by the Ottoman Empire c. 1453 , which spurred the Age of Discovery.

With colonization which started in the beginning of 15<sup>th</sup> century coupled with technology lead economic development, both the countries' economies remained static whereas Europe and American economies, leveraging the technological breakthroughs, surged forward. After both China and India got independence in 50's , both the countries had opportunities to seize the initiative and work for rapid industrialization but the socialistic pattern adopted by both the countries prevented such a surge to take place. China liberalised completely in 1978 and moved forward to become the second largest economy. Although liberalisation took place in India in 1991, it was incremental and as a result, the economic potential of India has not been fully exploited. Reason for same are analysis below :

**SEZs have disappointed** : They were started with great fanfare but SEZs in India have not been successful vide

graph below :

**GRAPH  
TOTAL EXPORTS AND SEZs EXPORTS**



Source : <https://www.ijeat.org/wp-content/uploads/papers/v9i1/A1476109119.pdf>

As can be seen, out of total exports of Rs.23,07,663 Cr in 2018-19, SEZs contribution is only Rs.7,01,179 Cr i.e. 30%. China has great success because the Chinese government created very large coastal based SEZ's whereas Indian SEZ's were mainly by private developers and are much smaller. China's SEZ contribute 20% to its GDP and constituted 60% of exports as against 30% by Indian SEZ's.

**Bottleneck to Export Surge** : The Modi government has declared intention to propel Indian economy to USD 5 trillion by 2024 from the present economy size of USD 2.9 trillion. If this is to happen, growth rate has to be 10% year on year which is possible only if the domestic growth rate is 8% year on year and export growth rate 2% year on year. This is possible subject to India being successful in taking following steps :

- i) **Raising the manufacturing contribution in GDP** : From current 16.7% to 25%.
- ii) **Making available inputs at international prices.** While the GST is certainly a step in this direction (avoids tax on tax) and setoff of the GST paid on exports is available, there are however major exclusions from GST such as 5 petroleum products, coal, electricity etc which results in following :
  - a) There is no setoff available on the taxes paid on the petroleum products for inputs for downstream products manufacturers.
  - b) There is no setoff available for the taxes paid on electricity generated etc.
  - c) There is no setoff available for transportation cost since the fuel tax setoff is not available for petrol, diesel , LPG etc.
- iii) **Improving the ease of doing business** : While efforts have been made and India has improved its ranking in ease of doing business from 77 to 63, a jump of 14 places among 190 countries, delays and bottlenecks continue and unless India figures within 1<sup>st</sup> 25 ranking, the Indian economy will continue to suffer. After all, delays lead to longer projects cost, disruption in supply chain, etc.

iv) **Logistic delays** : While road building and other infrastructure developments are undertaken at breakneck speed, there is a huge gap to be covered and the sooner it is bridged the better it is for international trade. India ranks 54 against China 28 among 160 countries in logistic performance index.

v) **Labour productivity** : There are 28 legislations on Industrial relations and attempt is being made to consolidate them into 4 acts. Sooner it is done, the better

vi) **High interest cost** : While the bank loan rates have come down from 18% to 12%, they are still very high and nowhere near LIBOR interest rate of less than 2%. In the process, the industry seems to be working only for the banks because CC's themselves do not make that sort of profit in their activities.

vii) **Economic Size of plant** : As a result of the license permit raj, monopolies act, encouragement of SSI sector, etc, huge number of uneconomic size plant capacities have come up. There is a moment towards upgrading these capacities as also mergers and acquisitions taking place but India still continues to have very large uneconomic manufacturing capacities

viii) **Emphasis on movement towards high value added exports** : Currently, the major exports from India are agro products, minerals, ores, garments , cut diamonds, etc, all of which are primary products with very little value addition. There is also export of petroleum products but then the crude is important and various cuts are exported with very little value addition expect collecting toll manufacturing cost. As against the above, the major imports of India are electronic products, precision machineries etc. which are high value added products. No wonder, India has a trade deficit of USD 176 billion. But the deficit has not affect foreign exchange reserves due to services exports worth USD 81 bl and NRI remittances bridging the gap vide table below :

**TABLE  
IMPORT EXPORT STATUS FOR 2018-19**

| Merchandise April-March 2018-19        | Services April-March 2018-19* (Estimated) | Overall Trade = Merchandise+Services April-March 2018-19* (Estimated) |
|--|---|---|
| Exports<br>USD 331.02 Billion<br>9.06% | Exports<br>USD 204.43 Billion<br>6.26%    | Exports<br>USD 535.45 Billion<br>7.97%                                |
| Imports<br>USD 507.44 Billion<br>8.99% | Imports<br>USD 123.86 Billion<br>6.43%    | Imports<br>USD 631.29 Billion<br>8.48%                                |
| Trade Deficit<br>USD 176.42 Billion    | Net of Services<br>USD 80.57 Billion      | Trade deficit<br>USD 95.85 Billion                                    |

Source <https://pib.gov.in/newsite/PrintRelease.aspx?relid=189768>



But the remittances received from Indians working abroad as also IT exports are both labour oriented low value added activities. For example, 10 tonnes of iron ore export value is less than a lac of Rupees whereas for 10 tonne Rafel fighter , India pays a price of Rs.1600 crores! This type of value added products India has to produce and export.

**Short Term Action Plan :** CII has identified following list of products among others which can boost India's exports in the immediate future<sup>(2)</sup>. They are -

- Jewellery and precious metals
- Medicaments pertaining to therapeutic uses
- Tractor accessories and motor vehicles
- Flat-rolled products of iron or non-alloy steel
- Flat-rolled products of iron or non-alloy steel
- Plates, sheets
- Parts suitable for use solely or principally with internal combustion piston
- Pharmaceutical preparations
- Motor cars and motor vehicles
- Turbojets, turbo propellers
- Motor vehicles for transport of goods
- Electrical apparatus
- Articles of plastic

**Conclusion :** India and China were dominating economies till beginning of 15<sup>th</sup> century including global trade through Silk Road and Spice Trade Routes. With the colonization and rapid advances in technologies, gradually, the two countries loss their dominant position in the global economies including in exports. Both the countries got independence around 50's but due to socialistic pattern

adopted could not take advantage of the rapidly growing global economic activities in the West including export trade. With the liberalisation in China in 1978 and in India in 1991, the situation started improving but China has galloped with massive liberalisation steps whereas with increment liberalisation, India is lagging behind. The time has come to remedy the situation by accelerating the reforms in Indian as elaborated in the paper including greater emphasis on high value addition in the manufacturing sector. The paper also suggest some products India can concentrate to give export thrust in the near future pending several structural reforms required to be done in the manufacturing sector. If India has to achieve USD 5 trillion economy by 2024, apart from 8% domestic growth rate, India is required to achieve 2% export growth year on year. These are targets achievable if determined efforts are made. Hope the powers that be stand up to the challenge.

Sources :

- 1) GDP:Another GDP debate: Decoding the truth behind India's ancient economic glory – The Economic Times
- 2) <https://www.financialexpress.com/economy/exports-down-economy-sagging-these-31-products-can-boost-indias-global-share-check-full-list/1652142/>

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# Role of Language and Culture in Global Business

Devaki Kunte



Globalization has successfully redefined markets and the way business takes place, though Language and Culture have been fundamental in business even before globalisation. As more companies grow, and the global marketplace becomes more accessible for small businesses, multinational and cross-cultural teams are becoming more common. This means that it is crucial, now more than ever, for businesses to understand the culture of their foreign markets if they wish to succeed internationally.

What does 'understanding culture' exactly mean? Does it mean learning a new language or is intercultural training indispensable? Culture is a very complex term and can comprise of a lot of factors like language, traditions, religion, attitude, beliefs, education, and

many other aspects which influence the way people live, think, and make decisions - and of course the way business is conducted. As an example, in most western countries like the US or Germany, timelines are treated differently than in India. Hidden costs of culture in offshore business can emerge due to differences in interpretation of process and tasks, project delays, misunderstanding, etc. Hence to avoid such hiccups, it makes business sense to invest time and money in services like intercultural communication, localisation and language training.

Complete understanding of the culture of a given region is an integral part of branding and marketing activities. And that goes not only for the message to be conveyed but also the channels and formats to be used.

Marketing and market entry strategies should base decisions on the target public - communicating with a specific audience should be depending on THEIR needs and lifestyle. That's step one to effective communication on a global level.

For time immemorial, language has bridged the gap between any two societies or cultures. For companies entering new markets, it is the ultimate ice breaker! It can make or break a deal - since incorrect language usage can affect perceptions about the quality of the product itself!

Although English is considered the 'lingua franca' of the international business world, being able to communicate in English is not enough. Other factors like thorough cultural



# Traceability System for Pesticide Residue in grapes for export to EU and other countries – a success story of Maharashtra

Govind Hande



Maharashtra state has become a leading state in Horticulture in the country. The state ranks first in Area, Production and Export of Mango, Grapes, Banana, Pomegranate and Vegetables. The State is earning foreign exchange by exporting these fruits to other countries on large scale. To full fill the requirement of Importing country Hortinet traceability system like Grapenet, Mangonet, Anarnet, Vegnet and citrus for registration of exportable farms is successfully implemented in the State .

## Comparative statement of Fruit export from India and Maharashtra (2018-2019)

| Crop                   | India       |                | Maharashtra |               | Maharashtra share % |         |
|------------------------|-------------|----------------|-------------|---------------|---------------------|---------|
|                        | Export (MT) | Value ( Crore) | Export (MT) | Value (Crore) | Export %            | Value % |
| Grape                  | 246134      | 2335           | 230203      | 2210          | 94                  | 95      |
| Mango                  | 46510       | 406            | 21574       | 193           | 46                  | 48      |
| Banana                 | 134503      | 412            | 65559       | 230           | 49                  | 55      |
| Pomegranate            | 67812       | 688            | 57335       | 537           | 85                  | 78      |
| Oranges                | 43098       | 248            | 20345       | 120           | 47                  | 48      |
| Other fresh Fruits     | 132412      | 737            | 15023       | 91            | 12                  | 12      |
| Other Processed Fruits | 372214      | 1835           | 153451      | 896           | 41                  | 49      |
| Mango Pulp             | 105872      | 658            | 21068       | 168           | 20                  | 26      |

Source: DGCIS

**Comparative statement of Vegetable export from India and Maharashtra 2018-2019**

| Crops                   | India       |               | Maharashtra |               | Maharashtra share |         |
|-------------------------|-------------|---------------|-------------|---------------|-------------------|---------|
|                         | Export (MT) | Value (Crore) | Export (MT) | Value (Crore) | Export %          | Value % |
| Onion                   | 2182826     | 3487          | 1323481     | 1941          | 60                | 57      |
| Other vegetable         | 720558      | 1951          | 152769      | 679           | 21                | 35      |
| Processed Vegetables    | 248116      | 2474          | 69859       | 781           | 28                | 32      |
| Fruit & Vegetable seeds | 16151       | 859           | 1660        | 330           | 10                | 38      |

Source: DGCIS

**Comparative statement of Cereals export from India and Maharashtra 2018-2019**

| Crops            | India       |               | Maharashtra |               | Maharashtra share |         |
|------------------|-------------|---------------|-------------|---------------|-------------------|---------|
|                  | Export (MT) | Value (Crore) | Export (MT) | Value (Crore) | Export %          | Value % |
| Maize            | 1051277     | 1871          | 141498      | 294           | 14                | 16      |
| Pulses           | 289594      | 1822          | 154257      | 959           | 53                | 53      |
| Non Basmati Rice | 7599595     | 21185         | 526900      | 1457          | 7                 | 7       |
| Jaggery          | 313823      | 1606          | 166248      | 834           | 53                | 52      |

Source: DGCIS

**State wise Farm Registration Status under Traceability net system in 2019-20.**

| Sr. No. | State       | Grapenet      | Mangonet      | Anarnet      | Vegnet       | Total         |
|---------|-------------|---------------|---------------|--------------|--------------|---------------|
| 1       | Maharashtra | 43712         | 8847          | 1682         | 1107         | 55348         |
| 2       | Karnataka   | 98            | 10567         | 0            | 15           | 10674         |
| 3       | AP          | 21            | 5112          | 56           | 0            | 5189          |
| 4       | Gujarat     | 0             | 2044          | 35           | 24           | 2103          |
| 5       | Tamil Nadu  | 0             | 1353          | 0            | 11           | 1364          |
| 6       | Telangana   | 0             | 177           | 0            | 0            | 177           |
| 7       | Orissa      | 0             | 11            | 0            | 0            | 11            |
| 8       | UP          | 0             | 882           | 0            | 27           | 909           |
| 9       | WB          | 0             | 06            | 0            | 0            | 6             |
| 10      | Kerla       | 0             | 113           | 0            | 0            | 113           |
| Total   |             | 43831<br>99 % | 29106<br>30 % | 1773<br>94 % | 1169<br>94 % | 75894<br>73 % |

Source: APEDA

Grape is an important Horticulture crop grown in Maharashtra. Consistently Maharashtra ranked first in grape production and export too. Out of total export of grapes from India, Maharashtra contribute 98% share. It has emerged as export crop of Maharashtra State in European Union and other countries because of its quality and residue free production.

During 1995 Agriculture sector was included under the **World Trade Organization's (WTO)** regime and single window system was made

introduced for export of Agriculture commodities incorporated however at a same time stringent powers are given to the all member countries under **Sanitary and Phytosanitary Measures (SPS)** on scientific ground. The EU is more are more cautious about health safety issues and implementing pesticide residues measures in imported grapes in the interest of public safety concern under SPS Agreement.

In 2003-04 the EU rejected Indian grapes import on the ground of pesticide residue. The grape consignment from

India resulted with major hurdle to grape producer and exporters from Maharashtra. Maharashtra State has taken a lead to safe guard the grape growers and special initiatives was taken for the formation of the system of monitoring of pesticide residue issues under the guidance of Agriculture Processed Product Export Development Authority (**APEDA**) New Delhi, under Ministry of Commerce and Industries. Govt. of India through National Research Centre for Grapes, Pune, Maharashtra Rajya Draksha Bagaytdar Sangh (an organization

established by the grape growers and exporters).

Prior to execution of framed initiative on Pesticide residue was not monitored in holistic manner. For control of pest and diseases grapes growers were taking large numbers of spraying and they were not aware about **Post Harvest Interval (PHI)**, Label claim of pesticides and spraying techniques and judicious use of pesticides. Grape growers were facing the major problems of pesticides residues. At the same time farmers had a limited access for expert as they were either depend experts from Agriculture Universities as such they were dependent either on Agriculture Universities or private consultants.

To fulfil the **SPS** requirement of EU pertaining to pesticide residues in Exportable grapes, Maharashtra State has taken a lead for formulation of pesticide residue monitoring system in consultation with APEDA, National Research Centre for Grapes and Maharashtra Raja Draksh Bagayatdar Sangh.

To decide long-term strategies for resolving the problem for giving

assurance regarding export of residue free grapes to European Union, **“Farm to Fork”** total traceability system entitled **“Residue Monitoring System for Export of Grapes to European Union” (GRAPENET)** was formulated and implemented from 2006-07. The Department of Horticulture becomes the key Nodal Agency for execution. APEDA and NRCG become the Technical Nodal Agency and all others become stakeholders for the project work. As such, it was the first of its kind multi-stakeholder project implemented in the country especially in field of Export of grapes to European Union.

#### Objective of Traceability Net (Grape Net)

1. To establish a system for controlling residue of chemicals in exportable fresh table grapes at the farm and plot level
2. To monitor chemicals residues in soil and water at grape farms or plots and pack house.
3. To facilitate export of fresh table grapes by establishing a surveillance system for controlling residue of chemicals.
4. To establish a system for corrective action in the event of detection of

residue levels higher than those established through these system.

5. To ensure that grapes exported from India to the European Union.
6. To facilitate web-based traceability through GrapeNet with the objective of tracing and tracking of processes implemented product recall,
7. Single window clearance and reducing paper work

Software was developed for on-line Pesticide Residue Monitoring and Advisory System. Advisory capsules were developed to disseminate location specific residue advisories based on detection of residue MRL level. For Stakeholders

1. Registration of Grapes farms by State Horticulture Department.
2. Residue Analysis and Agmark Inspection by Laboratories.
3. Consignment creation, Online application for issue of CAG & PSC.
4. Certificate of Agmark (CAG) by Regional Agmark Office.
5. Issue of Phytosanitary Certificate by PSC Authorities.
6. Monitoring of Residue Analysis by NRL.

### Country wise export of Grapes to European Union during 2018-19 season through Grape Net system

| SR NO | EU Country           | Export (MT)   | Container (No) |
|-------|----------------------|---------------|----------------|
| 1     | Netherlands          | 70145         | 5137           |
| 2     | Germany              | 20139         | 1510           |
| 3     | United Kingdom       | 20168         | 1514           |
| 4     | Denmark              | 2401          | 187            |
| 5     | Norway               | 564           | 45             |
| 6     | Finland              | 1656          | 133            |
| 7     | Norway               | 564           | 45             |
| 8     | France               | 711           | 46             |
| 9     | Lativa               | 1022          | 58             |
| 10    | Luthivia             | 662           | 46             |
| 11    | Other (8)            | 3908          | 299            |
|       | <b>Total EU (19)</b> | <b>121470</b> | <b>8982</b>    |

Among the above activity Registration and Inspection of Exportable grape garden and issuance of Phytosanitary certification for Export and carried out by State government by On Line through Grape Net system very efficiently.

Considering the area under grapes and export potential , Residue Monitoring System Grape Net is implemented in the State in Major grape growing district viz., Nashik, Sangli, Pune, Ahmednagar, Solapur, Satara,

Latur, Osmanabad, Beed, Kolhapur, Buldhana, Jalna, Aurangabad, Jalgaon and Nanded .Every year was done by registration of exportable grape garden , District Superintending Agriculture Officer of Concern district. District Superintending Agriculture Officer are appointed as Registration Authority and for inspection of grape garden field officers are appointed as inspecting authority.

During 2018-19 about 43471 grapes garden are registered for export of

grapes to European Union under Grape Net through on Line system. Registered grape garden are inspected two times i.e. at the time of registration and before sampling for residue analysis and report are updated on Grape Net software. Training are given to the registered grapes growers through trained field staff regarding maintenance of plant protection record, use of registered and label claim pesticide, Mass awareness is created through print and electronic media

### District wise Grape Export from Maharashtra to EU during 2018-19 through Grape Net

Mass awareness programmes also created substantial impact among the farmers. Advisories are issued by the

| District  | Area Ha | No of Farm Registration | Farm recommended for export | Export MT |
|-----------|---------|-------------------------|-----------------------------|-----------|
| Nasik     | 56265   | 38459                   | 17259                       | 111647    |
| Sangli    | 21675   | 2215                    | 1142                        | 4552      |
| Pune      | 2575    | 1508                    | 104                         | 645       |
| Satara    | 480     | 474                     | 353                         | 2243      |
| Nagar     | 965     | 504                     | 161                         | 1059      |
| Osmanabad | 2910    | 237                     | 91                          | 406       |
| Solapur   | 18125   | 158                     | 43                          | 214       |
| Latur     | 366     | 130                     | 62                          | 428       |
| Beed      | 116     | 1                       | 1                           | 26        |
| Jalna     | 373     | 0                       | 0                           | 0         |
| Buldhana  | 37      | 0                       | 0                           | 0         |
| Total     | 104078  | 43172                   | 19121                       | 121469    |

by the experts as such knowledge gap is bridged. Hence, despite unfavourable climatic conditions in subsequent years after implementation of project there was no rejection of consignment on the ground of pesticide residues to European Union till 2019.

This was the first Pesticide Residue monitoring System for total traceability

initiative implemented in country in the field of export of grapes for fulfils the SPS requirement and complete assurance to European Union. Software was developed for on-line Residue monitoring and advisory system. Rapid communication technology tools were used for effective and accurate dissemination of advisories to end users.

It is an innovative multi-stakeholder initiative in the field of export of grapes to European Union. GRAPNET system is implemented on the scientific principals viz. Controlling Residue of Chemicals, Corrective action, establishing a surveillance system through registration, Inspection, residue testing, and Phytosanitary certification that helped to manage the residue problems and

increase in export . As such, it is innovative in terms of much needed synergy in working for common cause among research institutes and Agriculture Department. Data is accessible to all stakeholder and farmers as such there is total transparency in the project.

For giving assurance to European Union regarding pesticide residues in exportable grapes, total traceability on line software were developed in consultation with, State Horticulture Department, APEDA, NRCG and grape growers and exporters. The chronological activities of action plan implemented are given below,

#### 1. Development of software –

Software was developed by the APEDA, New Delhi in consultation with State Horticulture Department, NRCG, Grape Growers and Exporters. Software application developed and hosted on the web server (www.apeda.org.in) of APEDA. Software was developed for Registration, Inspection, Residue Testing, Consignment creation, online application for CAG & PSC,

#### 2. Involvement of experts –

Experts from APEDA, National research, Centre for Grape, State Horticulture Department were involved for scientific inputs for software development. They have designed garden for export and updation on Grapenet and issuance of phytosanitary certification for export to comply the quarantine requirement of importing countries and registration of exportable grape garden, Inspection of exportable garden recommendation for sampling for residue testing.

#### 3. Capacity building –

Knowledge updating of field staff is carried out by pre-seasonal and mid-seasonal trainings at NRCG level. The trained staff in-turn carries out on-farm trainings of grape growers. The feed-back under trainings is given to the experts for developing further action.

#### 4. Registration -

Registration of Exportable grape garden are registered every year in the month of October to December by getting application form from interested grape grower and

registration is made on Grapenet on line and unique computer generated registration no is given for 1 ha farm .( e.g.MH11PU238654) . District Superintending Agriculture Officer of concern district are appointed as Registration Authority.

**5. Inspection –** Inspection of grape garden for export grapes to European Union two Inspection are made compulsory. First inspection in 4A at the time of new registration and renewal and second inspection in 4B before sampling of grapes sampling for residue analysis and fit for export. Accordingly 4b report are updated online on Grape Net.

**6. Residue analysis –** For sampling and residue analysis APEDA accredited residues laboratories are authorized for sampling of grapes from registered and recommended grape garden. After analysis of samples result are updated online on Grape Net by laboratory.

**7. Agmark Certification-**After receipt of the laboratory result, if the results found ok, then exporter are harvesting the grape from registered grape garden with consent of grower and material is stuffed at Apeda accredited pack house .For grading certificate exporter are creating consignment Id and forwarding application to Agmark authorized laboratory online for grading certificate .after verification of the material Agmark grading certificate assigned to the consignment and certificate are issued online through Grape Net.

#### 8. Phytosanitary certificate –

Phytosanitary certificate are issued by State Horticulture department officers. After Agmark certified consignment application if given to PSC Authority online through Grapenet. After physical verification of consignment and found free from pest and disease Phytosanitary certificate are processed on line and signed copy in pre-printed stationary issued to concern exporter .

Pest monitors are appointed to verify the activity of pest scouts. For every 10 scout one pest monitor is appointed. Apart from monitoring they also undertake roving survey and record

observation in data sheet.

**9. Mass Awareness –**Registration and PSC Authority organize mass awareness campaigns at District and block level. Print media and electronic media are effectively used. Apart from that farmers training etc. are also organized.

The details of stakeholder involved in Traceability net system implementation of along with their roles is given below,

#### Commissioner Agriculture (State Department)

1. Key implementing agency of the RMP.
2. Registration of Exportable Grape garden
3. Inspection and recommendation grape garden fit for export and sampling for residue analysis
4. Issuance of phytosanitary certificate for fulfilling the SPS and quarantine requirement of Importing countries i.e. European Union
5. Give location specific real time advice to farmers through SMS.
6. Mass awareness campaigns through electronic and print media.
7. Effective system has been put in place for monitoring of pesticide residues and management for export.

#### Agricultural Processed Product Export Development Authority (APEDA) New Delhi

- 1.Preparation of RMP document
2. Coordination of all stakeholders
- 3.Maintenance of Grape Net software
4. Strengthening of pack house facilities

#### National Research Centre for Grapes, Manjri, Pune

1. Nodal technical agency for development and maintenance of software.
2. Finalize Annexure -5 and Annexure - 9 for use of recommended pesticides and analysis of pesticides.
3. Monitoring of Residue testing laboratory Work
4. Training to growers and field staff

State Agriculture Department is the nodal agency for implementation of the Grape Net and APEDA, NRC Grapes is the technical nodal agency for monitor-

ing of the System. State Department has appointed field staff for registration of exportable grape garden and recommendation of grape garden for sampling for residue analysis and their on line Data entry work. For effective monitoring of these work at State level monitoring cell is established at Pune headquarter.

Advance it Facilities are provide to Registration Authority at District and for Inspecting Authority at taluka level. Monitoring of work is all field staff is monitored through online only. As per International Plant protection Convention (IPPC) and Sanitary and Phytosanitary Measures (SPSM) for export of Grapes to EU Phytosanitary certificate is mandatory. Govt. of India authorize State official for issuance PSC for export .All PSC authority are trained and necessary advance it facilities are provide to them. PSC are issued through GRAPENET through online only. All data are made available on Grapenet MIS on APEDA Website to all stakeholders.

### **Successful outputs of the Traceability (Grapenet)**

**1. Software Development** - First time in the country pesticide residue and monitoring concept for export of grape to European Union was successfully implemented. Software for Residue monitoring on real time basis and advisory issuance was evolved and implemented resulting to automation and increased efficiency. Software has helped to improve delivery time of services. Direct technical advice from experts became possible and thereby bridging the gap between research and extension.

**2. Human Resource Development** - Capacity building through well structured training programmes conducted by APEDA and NRC Grapes have led to efficiency enhancement in extension officers functioning both at decision making level and grass root level. They have regained respect and confidence of farmers which appeared to be shattered there before. The field staffs that get trained through project will have the skills for becoming experts in future that will create self employment.

**3. Knowledge sharing** - The knowledge imparted to the farmers about the insect biology, damage potential, proper management practices and significance of biological control will go a long way helping them for achieve sustainable system-productivity. Farmers also gained confidence about pest identification and strategies to deal with it.

**1. Residue Management** - Residue monitoring system was developed for regular on-line residue monitoring for export of grapes to European Union. Software developed is useful for maintaining data base for future use. The data generated is useful for early detection of pesticide residues in exportable grapes and to combat the same. Farm registration and inspection of grape garden and recommendation of garden for sampling of grapes for residue analysis has simplified the procedure for residue monitoring. Software helped experts to get analyzed data for issuance of Phytosanitary certification for Export

Participatory response of farmers has increased substantially. The Traceability system was found to be highly cost effective in terms of area coverage and production obtained. Proved effectiveness of the project has helped to extend the project to other crops in the State.

Since inception of project there is no rejection of consignment on the ground of detection of pesticide residues under project. Project proved to be extremely useful to Government to safeguard farmers interest by protecting the crop losses due to pest problems and minimize the pesticide residue resulted in to increase in residue free export, and establishment of India Brand for export that will ultimately increase farmers income and add to state economy and help in getting foreign exchange to the country.

The activities of pesticide residue are monitored by the APEDA and State department, NRC Grapes regularly. The software has facility of data tracking for data entry and advisory dissemination. That helps for monitoring of data entry by exporters and Monthly progress

reports are the tools for monitoring of physical and financial progress. Periodical meetings of the Project Monitoring Committee are conducted at State Level. Steering Committee at State Level also takes periodical review of the project for current scenario and project upgradation.

Initially EU country wise MRL are prescribed and it is very difficult to monitor at farmers and maintenance of record also. The issue was discussed with EU and MRL of all EU countries are harmonized in 2009-10.

Bringing various institutes on common platform was another major challenge. By making them stakeholders under the project they were actively involved in project. All necessary facilities were extended to them to undertake the activity. Coordination of all stakeholders was sought through Coordinating Committee chaired under APEDA.

### **key benefits resulting from Traceability Net**

**1. Organization Level** – Residue monitoring system was developed for regular on-line residue monitoring for export of grapes to European Union. Software developed is useful for maintaining data base for future use. The data generated is useful for early detection of pesticide residues in exportable grapes and to combat the same. Farm registration and inspection of grape garden and recommendation of garden for sampling of grapes for residue analysis has simplified the procedure for residue monitoring. Software helped experts to get analyzed data for issuance of Phytosanitary certification for Export

Trained manpower is developed through the project. Despite climatic variations crop production and productivity is maintained. Pest population is consistently maintained below ETL. Pest management in eco-friendly manner became possible.

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**2. Stakeholders Level** – Easy to monitor and reduction in pesticide residue and complete traceability of the consignment i.e. farm to fork. Effective monitoring and reduction in no of documents .The data generated through project is immensely useful for Exporters. For all stake holder informative directory is made available on grapenet software.

**3. Farmer Level** – The capacity building has improved the level of pest identification among farmers. Farmers could now understand scientific Pesticide residue management concepts like MRL, PHI, Label Claim, and ETL. Location specific scientific advisories helped them to undertake appropriate control measures. The wasteful expenditure on plant protection could be saved resulting into reducing cost of cultivation with increased net returns. Pesticide demand by farmers is now need based instead of dealer driven. Farmers now opt for eco-friendly pesticide molecules and make judicious use of pesticides.

The knowledge imparted to farmers about pest biology, damage potential, proper management practices and significance of bio-control will go a long them helping them for achieving sustainable system productivity. And residue free export quality and well aware about the MRL requirement of importing countries .Grape growers are started export of their own produce to EU and other countries. Grape growers are getting better price for their produce.

To put an end-to-end system. For monitoring pesticide residue, achieve product standardization and facilitate tracing back from retail shelves to the farm of the Indian grower, through the various stages of sampling, testing, certification and packing. It was welcomed and actively participated by all stakeholders in the supply chain of grapes export, namely The Farmers, State Government Horticulture Departments, The testing laboratories, Agmark Certification Department, The Phyto-sanitary department, Pack houses, Exporters, etc.

Initially Residue Monitoring System for export of grapes to European Union was successfully implemented and resulted in to increase in export of residue free grapes from 22375 MT to 121456 MT. Farmers are getting higher price, reduction in No of spraying resulted in reduce the plant protection cost. Export procedure is simplified and growers are taking part in export.

#### **Outcome of the Traceability Net system,**

1. Every problem if dealt in right spirit has certain solutions that can be long term and effective.
2. Combined wisdom of experts and technical field staff can overcome the difficulties.
3. Collective approach by various agencies involved help to tackle the issue more effectively.
4. Sharing of information and group approach are effective media for proper implementation and visible impact.
5. Widening the horizons with every feedback can make the initiative more sustainable.
6. Data base generation and maintenance is very useful for planning future strategies.
7. Judicious use of pesticides can protect the crops with minimum disturbance to eco-system and minimize the pesticide residues.

#### **Major Challenges for Agriculture Export**

1. Plant Quarantine regulation
2. Pesticide Residues
3. Food safety
4. Traceability
5. Non Tariff Barriers

6. Import of Patented varieties
7. Good Logistic support
8. Strong Backward Linkages for quality production
9. Cluster Development Approach
10. New Advance Packaging Development

#### **Operational Recommendations**

- Focus on Clusters
- Promoting Value added exports
- Promote Value added Organic exports
- Development of organic export Zones/organic Food park with an integrated approach
- Marketing and branding of organic products
- Marketing and branding of organic products
- Develop uniform quality and packaging standards for organic and ethnic products
- Promotion of R&D activities for new product Development for the upcoming markets
- Marketing and promotion of “Produce of India”
- Promotion of PGI

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# Going Global – Some Thoughts

Vishwas Kale



What do we understand by the words – Going Global? It actually means going local in hundred different ways. This holds true for brand campaigns as well as for larger marketing initiatives.

A study done at Harvard last year found that 1,00,000 NRIs will return from the US to India over the next five years, while most major IT companies estimate that anywhere from 5 to 12 per cent of the applications they receive for middle and senior level positions are from NRIs. This is globalization in its truest form, not a one-way flow of human resources but a reciprocal relationship based on economic opportunity and market forces.

Lets us begin with three quotes.

*Today we are engaged in a deadly global struggle for those who would*

*intimidate, torture, and murder people for exercising the most basic freedoms. If we are to win this struggle and spread those freedoms, we must keep our own moral compass pointed in a true direction.*

**- Barack Obama**

*The Internet is becoming the town square for the global village of tomorrow.*

**- Bill Gates**

*The global importance of the Middle East is that it keeps the Far East and the Near East from encroaching on each other.*

**- Dan Quayle**

The power of business networking over the internet is ever increasing and therefore the ability of smaller

companies to access resources for foreign trade is also increasing. In effect this has made the cost of reaching out to far off customers decrease. Even if the market opportunities abroad may not be as best as we wish, they still exist very well. Their substantial relative value against the shrinking opportunities at home are very great.

The biggest challenge is whether you can get in fast to take advantage of the opportunities. One of the tough things about international business is that it takes time -- time to develop relationships you need to make sure that you are working with the right business partners abroad, time to get your product through the testing and certification requirements that will be needed abroad, time to get your branding and marketing approach



approved in the different culture of the foreign market, time to get your people trained in export documentation and logistics.

Now is the good time. The key to success will be finding ways to accelerate your ability to make it happen. But do not sacrifice the need to do it right. The opportunity is awaiting you!

Many great companies, who are in product development sector, have in common, excellent marketing and customer service. They have a genuine empathy for their customers. This inherent customer centric view allows them to anticipate and respond to customer wants and needs even before the customer has asked. Talk with the leaders at these companies, and it would be clear that they care about their customers as human beings. As a result of this, another phenomenon at companies such as this is that they tend to be active in the community in causes that are important to their customers. They willingly support the good works

that are important to their customers -- they raise money for the children's hospital, they sponsor the community little league, their employees organize crews to work on habitat for humanity houses etc.

When a business goes global, your customers become international, and if you are as genuine about your customers abroad as you are about your customers at home, you will find the growth.

Let us ask ourselves some questions.

**What are the budgets you have search for marketing this year?**

This has to be the first priority in your efforts. The budget is an indicator of your commitment.

**And who is doing this in your marketing team?**

A direct-marketing lead will generally be much higher than regions where there is a single point of contact for all things marketing. You have to establish your priorities as they relate to

regions or countries.

**What are your most important marketing initiatives this year?**

Here your our job is to support the business objectives of the region. Please do not make the mistake of trying to jam corporate marketing objectives with those of the regional teams. It will not work.

**What do you consider to be marketing success?**

This is a simple question. But different markets will have variety of objectives. So you should have different definitions of success. In our own country, we know of fixed cost, revenue, conversion rate, profit and return on investment. But in emerging markets, these will not hold good.

So go ahead and best luck!

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# International Marketing Strategies

Nandita Khaire

In many of my interactions with companies that I consult I have found most of them want to go international. I have summarised a series of steps that the management of SMEs that want to go international should consider. A good amount of study and research is required to prepare the plan. Where is the company now?

1. Where does it wish to go?
2. How can it get there? (**Table 1**)

## Success parameters in a competitive international market

- **Long-term commitment** - Having a long-term vision facilitates relationship with the key business partners and the customers.
- **Strong brand image** – the firm should have a brand strategy. The logo, website and other branding touch points should convey that image of being competent, global and modern.
- **Good Marketing Knowledge**- Entering a new market means bringing a product. Having good knowledge of marketing helps as it facilitates the entry of a product in a new market.
- **Identification with the Local Market (localisation)** - Bringing the product closer to local market and being able to adapt the full business processes to the local market is a key success factor.
- **Price Advantage** - Bringing a product that is more affordable will facilitate market penetration and success.

- **Technological Orientation** - Intellectual property and the hold of patents increase likelihood of successful market entry.

## Reasons why companies fail

- Lack of international experience - neglect in acquiring such knowledge. It is advisable to recruit experienced international trade employees or consultants.
- Poor analysis of the export market - A lot of market analysis of the export destination are biased and poorly made, which results in failure and misalignment of the strategy.
- Cost is too high – Cost calculation is not done properly
- Lack of stability in terms of employees - good employees in the host market is necessary
- Poor understanding of competitive conditions
- Failure to customise the product offering to foreign customers
- Lack of effective distribution
- Poor awareness among prospective customers
- Poor brand image

## The international marketing plan

At the heart of the plan, the firm should clearly define the marketing objectives. It helps to streamline the entire business process. It is followed by defining the strategy and tactics, planning the budget and finally Implementation and control. All marketing plans require

coordination and control during the period of implementation.

## Segmenting the market

Prospective international customers should be segmented, depending upon the use, needs, geography etc. each segment would require modifications in the marketing strategy. For example the needs of customers in France and Germany respectively, would be different

## The product/s

Product readiness for the international customer. Does it meet their needs? Some of the considerations are

- Modify existing product(s) - (what features and benefits will your products provide to the customer demands)
- Develop new product(s)
- Add or drop products from the line
- Determine product positioning
- Develop branding approach
- Register product designs, brand name, trademarks, etc.
- Tailor product packaging and labelling to the market
- Initiate product registration
- Installation
- Warranties

## Pricing

Important issues in pricing products for overseas markets:

- How will product price be determined (demand-based or cost-plus,

Table 1

|   | Marketing decision                            | Intelligence needed   |
|---|---|---|
| 1 | Go international or remain a domestic player? | Assessment of the company, SWOT analysis, product readiness and company readiness, company's potential share, local and international competition, compared to domestic opportunities |
| 2 | Which markets to enter                        | Global market demand, ranking of world markets according to market potential & PESTEL* factors  |
| 3 | How to enter target markets                   | Marketing plan- Size of the market, trade barriers, transportation costs, local competition   |
| 4 | How to market in target markets               | Marketing strategy - buyer behaviour, competitive practices, distribution channel, promotional media  |

- marginal costing or full costing)
- Price level compared to competitors (premium, parity or discount)
- Price variation (geographic margins, discount structure)
- Margins that will be offered to local partners such as agents, distributors, etc.
- Penetration pricing, market skimming etc.
- Terms of sale –(CIF -Cost Insurance Freight, FOB Freight On Board etc.)
- Terms of payment (cash in advance, letter of credit, etc.)

**Distribution**

Identify potential partners for the company (distributors, agents, joint venture partners, etc.). Here are the important selection criteria

Established company with proven track record of business success

- Sales and marketing expertise and extent of geographical distribution/network coverage
- Access to funds to support and sustain market entry for the company's products
- Personal contact in each of the targeted end-user segments
- High profile/integrity/good reputation, as perceived by end-users
- Complementary products manufactured/distributed
- Technical competence/ability to communicate to end-users
- Geographical extent of market coverage (**Table 2**)

**Branding and marketing communications**

This is a very important aspect of any company's marketing strategy. The key parameters to consider

• **The brand logo** – The logo look international and modern.

**The tagline** – every company must identify a tag line which communicates what the company stands for and the strong value proposition or benefit to the customer. In marketing language it is called 'USP' or 'positioning'. For eg the USP could be of leadership, or strong R&D etc.

• **Other brand touch points** – all other brand touch points should have a unified look and language. This includes the website, social media, marketing material like corporate brochures, presentations, fliers, stationery, visiting card, email signature, packaging - labels, stickers etc

**Internationalisation and localisation**

Every company that seeks a new foreign market should be sensitive to that country's culture, language, ethics and the way of doing business. It is advised to have a 'localisation' strategy for that particular market which will include having the ability to read the website in the language of that country. (Please do not use Google translate, as the translations often are incorrect and it will put off visitors), advertising in local trade magazines, digital marketing, translating marketing material like brochures, fliers etc.

**Website**

Localisation parameters for websites

- Ensure that the website looks modern. Content and photographs should be visually appealing.
- The website should be able to conform to various screens like tablets, ipads, phones, desktops and laptops.
- Translate the content into the

languages of the market to be entered and keep in mind the search words that customers of that country will use to search for your products. Those words should appear in your website

- Showcase products well. The photography of the products should be of excellent quality.
- Have a payment gateway.

**Marketing material**

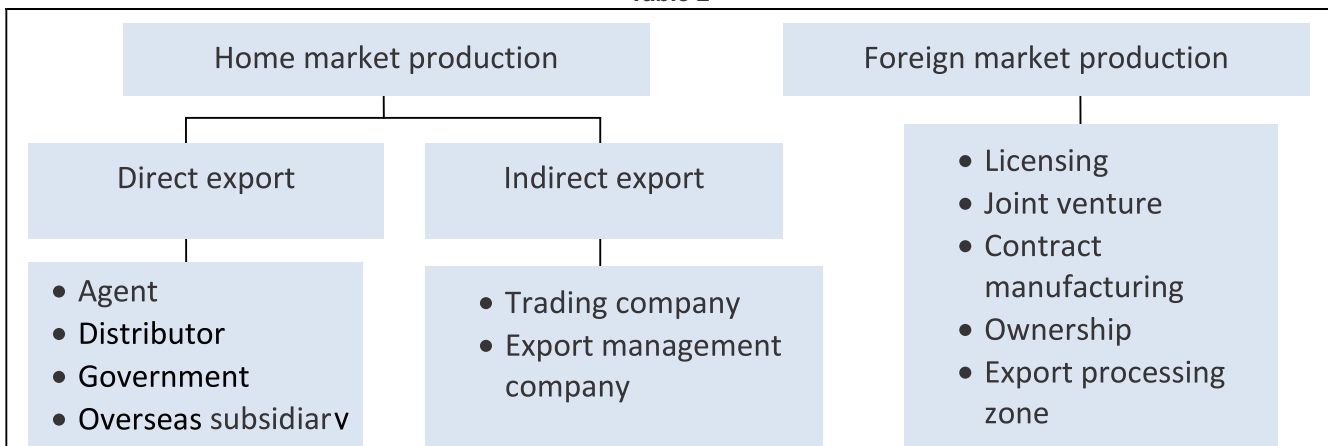
The marketing material like brochure, leaflets, flier, catalogues, pen drives, installation disks which are given to customers should be in the local language. In many countries, the customers may not know English. There should be a company brochure and a separate catalogue for products.

**Digital marketing**

In today's digitally enhanced marketplace, a lot of focus should be on digital marketing. A marketing team should be responsible for driving the digital marketing strategy and implementation. It includes

- Social Media marketing
- SEO tools - to 'rank' higher in search engine results pages in relevant country
- Content Marketing
- Pay-Per-Click (PPC) in the host country
- Email Marketing
- Online Public Relations (PR) or Online Reputation Management (ORM)
- Listings on yellow pages of the host country
- Listings on various industry portals and marketplace like Alibaba, Amazon Business etc

**Table 2**



**Direct mail :** When the sales team capture leads through networking or meetings, a database of should be created which should be segmented based on parameters like product usage, geographic locations, industrial sectors etc. An email strategy should be developed and periodic emailers should be sent.

However the marketing team should be aware of GDPR (General Data Protection Regulation) of the country. There are guidelines to send out promotional emails.

**Trade shows :** Tradeshow are the best platform to introduce the company. The entire industry comes under one roof during a trade show. Tradeshow provide opportunities to generate leads and a platform for networking.

**Packaging / product design / industrial design :** Packaging and product design should be adapted to suit the needs of that country. It should conform to government regulations, geographic and climatic conditions, buyer preferences or standards of living. In case of consumer products – religious practices, habits, preferences should be studied

Engineering and redesign - For example, electrical standards in many countries differ. Many kinds of equipment must be engineered in the metric system for integration with other pieces of equipment or for compliance with the standards of a given country.

**Label and Typeface :** Different countries have different regulations about the information product labels should or should not contain, therefore size and layout of information on the label may need to change in order for the product to enter a certain country. It is necessary to use the local script / typeface on the products / packaging.

**Images, Patterns, and Shapes :** Customer preferences for images, patterns and shapes should be studied while entering a new country. For example, in China, Nivea offers a line of lip balm packaged in smaller solutions than the ones sold in the western countries because Chinese consumers tend to prefer packages of smaller size.

**Material :** A growing segment of the population worldwide and in China dislikes products using too much waste material for the packaging directly due to environmental concerns.

**Colour :** For example, green is not popular in Japan, France, or Belgium, while it can be frequently seen on the packaging designed for Turkish and Austrian consumers. People from Islamic cultures react negatively to yellow because it symbolizes death but like green as this is believed to help fight off diseases and evil. Europeans associate black with mourning and tend to prefer red, grey, green and blue. In the Netherlands, orange is the national colour and therefore can be used to arouse nationalistic feelings. Colours have a strong significance in Chinese culture as well. Yellow, as the colour that was only for the emperor to wear, and red, as symbol for happiness and good luck, are both very powerful colours for designing product packaging for this country market. Chinese consumers generally find appealing these bright and shiny colours for food products but tend to prefer white and pastel colours for personal care and household items. Kleenex for example, features brightly colour and slightly abstract flowers on the packages sold in the US but it designs Chinese packaging with pastel colours and small, delicate and realistic flowers.

Coca Cola, to cite a brand that truly masters the art of packaging localization, gives as much importance to the Chinese written brand name as the original English one.

Chinese typeface, therefore, becomes integral part of the brand identity in China and shapes the packaging in an unmistakable way.

**Road shows :** The company should organise road shows. Road shows are organised by trade associations, business chambers to bring buyers, sellers, potential investors of the industry and are held in various cities of the country.

**Networking :** Networking and public relations provides many business opportunities

- Connecting with the foreign embassy or foreign trade associa-

tions, in India, as one of the key objectives of these institutions is to foster trade and business. Network with embassy, trade organisations and local chambers in the foreign country.

- Attending international trade summits and conferences
- Participating in business delegations
- Building good will with local agents, distributors and customers of the country that the company wishes to enter.

**Culture :** Doing business in another country requires more than just knowledge of the language or a good interpreter. It is important to know their communications, etiquette, and organizational hierarchy that can help avoiding misunderstandings. For example, in Japan the exchange of business cards (meishi) is an important ritual when meeting for business for the first time. The highest ranking person gives out business cards first. Cards must be given and received with two hands. Cards should handed face-down to the receiver. Cards should be kept on display for the remainder of the interaction. Cards should be kept immaculate as possible.

Business trips should be planned keeping the mind the holidays and festivals like Christmas / Easter / Thanksgiving etc. The holiday season in European countries starts in June to September and it is advisable not plan any business trips during that period. The best time to visit Japan is between May to July, September to November.

**Implementation :** Implementing the plan is the most challenging and requires focus, long term commitment and dedication. The management should assign a marketing team (of two persons) to implement the plan and ensure its sustainability and success under an able and dynamic leadership.

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# ようこそ! Welcome!

## Japanese Business Etiquettes

Vishakha Rahul Barve



Japan is known worldwide for its traditional Arts including Tea ceremonies, Calligraphy and Flower arrangement. For flower arrangement 'Ikenobo' is one of the famous institute in Pune. Japan is birthplace of Sushi. The Japanese name for Japan is "Nihon" or "Nippon" which means "Sun Origin". Japan is made of 6,852 islands. The highest point in Japan is Mount Fuji, which stands at 3,776m (12,388ft). Writing about Japan is not an easy task, country is small but its achievements are plenty. So I have decided to write a series of article. Each article will give you useful information about Japan like How to start business in Japan, Why does Japan work so hard? , Things not to do in Japan, Landed in Japan and so on.

In this article let us focus on Japanese Business Etiquette Basics,

some do & don'ts, which will be important tips to grow or to start business with the Japanese people.

It would be great impact if you know Japanese language or at least some business greetings in Japanese language. Like 'O Genki Dess ka' means 'How are you?' or 'Arigatou Gozaimasu' means 'Thank you so much'. Try to join some crash courses, it will not take more than a month to learn Japanese business greetings.

\*Business Cards: In Japanese business culture, business card is everything. It represents your company, your brand, your position, Title and family name in Japanese. Please make sure that your card is translated in Japanese, you can keep one side in English and other side of business card in Japanese. The Japanese exchange

cards at very beginning of meeting, so don't wait till last minute. This is like introduction which begins with business cards. Business cards are essential business tool in Japanese culture. The Japanese treat business card as if that person, so please treat them with good respect.

**Important!** : When you receive a business card from Japanese person, never ever put it in your pockets of trousers. Keeping anything below your waist is disrespectful, when you receive business cards, please receive/give it with both hands and read it carefully : the Name and Title. If you have a card holder, please us that to keep business card in it. During the meeting put the cards on table, so you can refer information while discussing. Just remember you treat them with respect.

**Table 1 : Example of Agenda**

| Time    | Purpose   | Responsibilities   |
|---------|---|--|
| 5 mins  | To explain why we are moving to new team structure                    | Lily: to give short presentation   |
| 30 mins | To agree new team role and to decide who will be responsible for what | Everyone : Preferences/ what you can offer<br>Organiser : Send out agenda details before meeting, so each one can raise their hand to express thoughts |
| 10 mins | To answer any questions and / or concerns                             | Shaila: To answer and note questions<br>Everyone : Come with questions prepared  |

**Winning/ losing your business:**

Simple way to show deep respect is to identify who is the most senior person and give them most prestigious seat during the meeting. When you finish the meeting, standing up walking them to the door, walking them to the lift and if you want really long relationship then walking them all the way to car and waving them Goodbye. One more way to build strong business relationship with them is, take them for their favourite sports like golf, talk to them regarding business and make sure Japanese person will win from you in sport! Of course! They will win!

In Japan there is hierarchy, you and me are not same. In Japanese meetings, seating system is never random, the places are allocated. It is good because it tells rank of each person, it tells you hierarchy within that group.

**\*Be prepared:** Japanese really value effort. When you go for a meeting, make sure that you are prepared, not only in terms of presentations but make sure you always keep pen, notebook or notepad even if you are not presenting. During the meeting make sure that you are writing some notes. In Japanese culture showing efforts are important. Don't come for meeting open handed, make sure you have something in your hand. You can also use digital dictionaries to search words of Japanese language which you don't understand. Japanese people are also using digital dictionaries to understand English words. Nothing wrong in that.

Agenda and preparation, a little bit of investment of time on preparing agenda

can go long way. Let us look some biggest complaints about meetings  
1) Poorly structured and No Agenda  
2) Meetings are too long and go off topics  
3) People don't prepare for the meetings.

Let us see how we can make it better  
1) Discuss the new team structure like What the new role are? Whose going to do what? Or Proposal for new team structure also about workflow and technology. Then Agenda items could be much clearer. **(Table 1)**

During the meeting with Japanese, something that you might notice is Japanese culture is indirect. In the meeting don't ask any decision making questions, if you ask you will not get any direct answer. So don't expect decisions on the spot.

**Important!** : Japanese people are not used to make direct eye contact, so don't look in to the eye at the beginning of meeting; in American culture it is possible. While having face to face conversation with Japanese try to keep your eye site on mouth side or chin side area or neck side, not too strong, try to do it in natural way.

**\*To be entertained and also entertain:** In Business meetings you go out with Japanese for lunch or dinner. On the table make sure that you are not asking them what to have on menu, since they have no idea about our food. First ask them about spice level also preference for veg or nonveg, suggest what would be good for them or even it is okay to order for them. If you visit Japan they will ask for your preference first and order

for food accordingly. Make them feel comfortable so they don't feel awkward. Important! : Japanese people really enjoy wine, sake, whisky any type of alcohol beverage, it is part of business culture as well. One more interesting thing is, in Japan it considered bad luck if you are pouring your own drinks. When you see Japanese glass are getting empty or low with drinks, please serve them or pour for them, same with water. Bad manners if you see their drinks empty.

These are very basic business etiquettes. Things to remember while having business with Japanese.

- Meeting with business cards
- Make sure you don't make direct eye contact
- Agenda and preparation.
- Don't go open hand, make sure you have note pad, pen, take note to show efforts is value in Japanese culture
- Entertaining, dinner or lunch time : order for them

I hope your meeting will be a success! Arigatou Gozaimasu Thank you!

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# Club your branding with culture in international market place

Chetna V. Popatkar



Evolved value chain acts as the forefront for initiating international trade. Looking for new opportunities and following the shift in value creation within your industry. Has expanded scope to indulge in international business opportunities.

There is no single formula to mark your expansion in international market. Even if you are not trying to attract global markets directly, but if your clients are, then you better know how. In fact, the results from a new McKinsey Global Survey on the topic suggest that the companies that see the most growth follow diverse paths. So whether you choose to grow organically or pick the global strategy of Aggregation or Arbitrage. Understanding the consumer buying behavior and building strong brand around it is the most complex task facing firms in today's international market.

Brand Equity although a concept than anything else acts as a framework for understanding the power of consumer's behavior towards your brand. As stated by the Kevin Lane Keller, marketing professor at Dartmouth College. Consumer-based brand equity dominates over employees and various other stakeholders' perspectives. As actionable strategies are devised around customer purchasing power. Glocal is the most trending international business tactic that implies to "Go Global and Act local". In the mist of achieving this the firms quickly taps into a linear option to build new brand associations, partners, and create PR and brand awareness campaigns. This may definitely mark your physical presence in the target market but to sustain the brand success over the long term depends on your brand equity. Most of firms choosing the organic growth path to

expand in international market fail as they break the brand equity into multiple elements to achieve quick wins.

One such study by Elsevier recognizes brand equity by addressing of three building blocks, the brand building block (BBB), the brand understanding block (BUB), and the brand relationship block (BRB). This study illuminates the difference in consumers buying decision by dividing it into individualistic and collectivist cultural groups. Underlining that individualistic cultures look for consistency in brand perception which is in line with their more analytical way of thinking contrary to collectivists who focus highly on the social product benefit to make brand recommendation and repurchase decision. Confirming the set observation that one size does not fit all when you plan to venture in international market.



Dunkin Donuts makes a great example for our case. With over 3,200 stores in 36 countries outside of the U.S., Dunkin Donuts has evolved its menu to satisfy the sweet tooth of its global customers. From Korea's Grapefruit Coolata to Lebanon's Mango Chocolate Donut to Russia's Dunclairs, it's clear that Dunkin Donuts isn't afraid to celebrate cultural differences in an effort to strengthen its international presence. Likewise, B2B businesses could consider their clients' global customers as their own and provide solutions that make use of multi-language, multi-currency and similar options available.

Combining the theoretical aspect of brand equity suggested by Keller and the cultural difference in the dynamic international market. Its fundamental for firms to spot the impulse of the End-User rather than the target client or partner to grow with. These initiatives will result in high growth associated with strategies based on creating and performance dimensions. However, brand equity is not the end goal in itself as its value needs to translate into benefits for firms, for example, in terms of consumer outcomes, brand

recommendations, repeat purchase, positive word of mouth, willingness to pay premium price and brand preference. But to achieve the intangible assets make culture and branding as your strengths to accompany you in your growth path.

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# World Economic Forum 2020: From Industry 4.0 to Business 4.0

Matthew Hoffer



During a private dinner at last week's World Economic Forum Annual Meeting in Davos, a long-time regular attendee outlined the occasional chasm between actual risks to the global economy and risks as predicted by the 'Davos-elite'.

In 2007, the main risk was considered a hard landing of...China's economy. In 2010, executives talked up the risk of asset price inflation...10 years on we are (perhaps now finally) at the tail-end of the longest ever market bull run.

This year, just as corona virus is spreading global, the Global Risks Report lists the top five risks as climate and weather related (26 risks are considered to have a greater likelihood of occurring in 2020 than infectious diseases).

With these risks in mind, one of the big shifts over the past decade has been

the belief that the private sector should play a greater role in addressing some of the world's critical issues, serving all stakeholders, not just shareholders. Natarajan Chandrasekaran, chairman of Tata Sons, outlined the imperative of "bringing a sense of urgency to turning sustainability pledges into action".

It is here where the World Economic Forum has played a central role, bringing together all stakeholders to create a roadmap for impactful collaboration. The WEF's core strategy, where it has enjoyed unrivalled success, can be said to be driven by the following two components: no stakeholder alone can solve the world's challenges; and how do you even begin to address these complex issues without talking? Better to jaw-jaw than to war-war, as Winston Churchill once remarked. In today's world of hyper communications and indigestible amounts of data, bringing world leaders and key personalities

together for a sensible, civilised and proactive discussion is invaluable... and therein lies the real value of the WEF and the 'Magic of Davos'.

## **Business 4.0: Defining the new role of business**

So what should be the role of business be in serving all stakeholders and helping us achieve better societal outcomes (for instance, the SDGs)? Whilst this a question each CEO must decide according to their company's societal priorities (and there are no shortage of societal issues to address!), what can be uniformly said to be true is that whatever businesses do, they'll need to do it with tech and they'll need to do it better with tech. Therefore, to achieve their societal objectives, the CEO's focus must be on the efficacy with which their company uses technology.

In Davos, Tata Consulting Services

(TCS) promoted the term Business 4.0. If the Fourth Industrial Revolution is the fusion of the physical, digital and virtual worlds, Industry 4.0 is how companies use technology to navigate those worlds. Business 4.0, by contrast, focuses on how companies must transform in order to leverage the exponential benefits that technology can bring, whether it's a complex cloud-migration, integrating advanced digital technologies or developing successful tech-partnerships (particularly with verticalised start-ups).

Think of Business 4.0 as 'smart' digital transformation for complex organisations navigating a world of complexity. Although American business discourse tends to frown upon complex businesses, in truth, complexity is not a normative value. It can be good or bad, and well-run complex businesses will out-perform in today's business landscape precisely because the global system is marked by unprecedented systemic complexity.

One interesting observation at this year's Davos was a more overt push-back at the consensus that all companies are tech companies. Google is not about to become an 'FnB' or a consumer goods company. So why should Nestle suddenly become a 'tech' company? Nestle should remain a diversified foods conglomerate and Goldman Sachs a bank, for good reason: They are specialised in these fields and know what they're doing. They understand better than anyone else the value chains, supply chains and critically, their end customers. Rather than focus on transitioning to tech, what companies should instead focus on is successfully digitally transforming. **Being a tech company and digitally transforming are two very different things.**

Therefore, to use technology to profitably serve both societal stakeholders as well as shareholders, companies will need to leverage the power of tech by focusing on business transformation and business outcomes, particularly learning how to leverage the complexity of the global system to their advantage, embracing risk and creating new sources of value to customers and societal stakeholders alike.

### Digital Transformation in Business 4.0

The key question then, is how CEOs can know for certain that the company's technologies are truly driving their strategy? More pertinently, if a major capital investment into new, advanced digital technologies (ADTs), such as AI, is being considered, how can it be made certain to be sure the organisational structure, particularly legacy systems, processes and people, will successfully integrate this technology? Upskilling was another key theme at this year's WEF. As Satya Nadella remarked, there will be more new jobs, and we just need to be sure people are being trained correctly. The knowledge economy must serve all workers, not just skilled workers

Finding the answer to these questions is the key Business 4.0 challenge.

### More money, more (tech-led) problems

For CEOs without a technology background who think that throwing money at this problem will solve it, the bad news is: it won't. Simply investing in technology, or hiring a CTO or a CDO will not fix the problem. In fact, it could make it worse. According to research from Forrester, a remarkable 80-90% of digital transformation projects fail, because they are led by technology, rather than by strategy.

### Digital Transformation in Business 4.0: a new way of competing

To digitally transform in this new digital context, case studies and research of those companies that have successfully done so consistently point to three factors that they focus on and prioritise:

#### 1. Strategy

Technology today is becoming increasingly ubiquitous. Google, for instance, gives away most of its advanced AI, such as TensorFlow, for free. Any company can now access analytics through the cloud. Instead, your point of differentiation, your USP, is your strategy.

#### 2. Organisation

Organizational structures remain the single greatest obstacle to digitally transforming, particularly when it comes

to re-skilling your employees to create a greater digital DNA, digitising your processes and innovating your business model. This last point is critically important, because your competitors in the future (if not already) will not be the same as you and will have radically different business models (think hotels vs AirBnB).

#### 3. Data

A remarkable 75% of data companies hold are not used for any strategic purpose whatsoever. This is criminal because data can (and should) be one of your greatest assets. To turn data into a strategic asset requires a comprehensive data strategy, which then allows you to take advantage of Big Data and apply advanced analytics in a much more impactful way.

### The key to successfully transforming

Companies are increasingly demanding more bespoke advisory to enable them to succeed at digital transformation. The good news is, a blended model is beginning to emerge for how this can be done, combining human-led intelligence with machine learning and advanced analytics, to deeply personalize a firm's transformation whilst enabling leadership to think and act much more holistically about how technology can add value to their business, enabling them to serve all stakeholders in a far more targeted and impactful manner.

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# Pune and Switzerland : Special Business Relations



**Othmar Hardegger**

Switzerland and India enjoy a long-standing relationship that began with the Friendship Treaty signed in New Delhi 72 years ago. The treaty was one of the first of its kind signed by independent India. Since then, Indo-Swiss relations have transformed into a full-fledged partnership which keeps developing in many fields. Trade and investment represent a particularly strong pillar of our relationship. Today, India is Switzerland's fourth largest trading partner in Asia and the largest in South Asia. In 2019 the total trade volume exceeded CHF 20 billion.

India is a significant market for Switzerland from a foreign direct investment perspective as well. Over the last two decades, Swiss companies invested close to USD 5 billion in the country, per data published by India's Ministry of Commerce and Industry. Currently, more than 250 joint ventures / subsidiaries of Swiss companies are operating in India providing well over 100'000 direct employments.

For the last 30 years, Pune has been a favored location for Swiss investments in India. Around 40 Swiss companies from diverse sectors such as automotive, textile, packaging, industrial equipment and precision instruments operate manufacturing plants in the city. Moreover, these companies continue to expand in the region with increased investments to enhance manufacturing and development capacities. This track record is also attracting new Greenfield investments. In 2019, Givaudan, a leading Swiss producer of flavor and fragrances, opened its new manufacturing facility in Ranjangaon MIDC. The 40'000 m<sup>2</sup> plant was built with an investment of CHF 60 million (INR 400 crores) and employs 200 people. A primary driver for these investments is the excellent infrastructure and ecosystem available in the different industrial areas of Pune such as Talegaon, Pimpri-Chinchwad, Ranjangaon and Chakan.

Besides manufacturing, Swiss companies from the service sector have also registered their presence in Pune. The largest banks, UBS and Credit Suisse, over the last few years, have steadily increased their operations and staff. In 2018, UBS opened its second office in Pune (fourth in India) at the EON IT Park mainly to focus on the development of advanced technology and business processes. Credit Suisse set up a 44-acre campus in Kharadi in 2019, which develops IT solutions for its global business operations.

These recent developments indicate that Pune remains a preferred hub for Swiss companies entering India. The proximity to Mumbai with its well-connected air and seaport, an ample supply of talented engineers and skilled workers as well as presence of automotive, engineering and IT clusters act as main pull factors for investors. Availability of land in various industrial zones and a pleasant climate are other key drivers.

The Swiss relations with Pune extend beyond corporate investments. In the area of sustainability, there are other examples of promising collaborations. In September 2019, the Pune Metropolitan Region Development Authority and the Swiss 2000Watt Smart City Association signed a MoU to join forces in the Pune Metropolitan

Region's initiative to create carbon neutral Smart townships. The private Swiss partner has implemented smart city projects in Switzerland and will deliver the concept and guidelines for new carbon neutral townships in the Pune region. Further, Switzerland supports India's efforts in tackling air pollution by contributing to the National Clean Air Program aimed at reducing pollution levels in cities by 20 - 30% by 2024. In this context, the Swiss Agency for Development and Cooperation has initiated the 'Clean Air Project in India (CAP India)' to improve air quality, while contributing to public health, environment and climate change mitigation. CAP India will assist Pune city in implementing relevant measures of the city clean air action plan based on international good practices. The project taps on Swiss research available with the Paul Scherrer Institute and EPFL transferred through collaboration with TERI, IIT Kanpur, NEERI & ARAI. The project will also cover the cities of Nashik, Lucknow and Kanpur.

In the area of education as well several Swiss manufacturing companies in Pune are engaged in vocational training replicating a Swiss style VET program for their employees.

At the Consulate General in Mumbai, we are constantly striving to support and participate in initiatives that foster cooperation across business, sustainability, cultural, education and tourism related goals. With continued support from the central and local authorities as well as business chambers such as MCCIA, we are confident that Pune will remain an attractive location for Swiss stakeholders in the future.



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# Pune and Poland : Special Business Relations

**P**oland and India are both powerful economies in their respective regions. Poland is the largest trade partner of India in Central and Eastern Europe. India, on the other hand, has been deemed as one of Poland's most prospective export markets outside the EU. *Poland has been recently associated with the advanced IT and AI solutions. One of the examples is Billennium, a company providing innovative business tools, investor in Pune.*

The close economic cooperation between the India and Poland remains promising and strategic. In the first quarter of 2019, commodity turnover between India and Poland amounted to USD 727.3 million, which is the similar as in the previous year – USD 737.5 million. The most prospective sectors for cooperation are: agri-food processing, mining, and green technologies. Moreover, both countries are seeking to work closely together especially in the field of eco-friendly mining technologies and the use of coal in industry and power generation. Furniture and cosmetics sectors, in which Polish companies already having a well-established presence and globally recognized brands, are also considered to be promising areas of Polish-Indian collaboration. Furthermore, two countries are now connected thanks to direct PLL LOT flight from Warsaw to New Delhi launched in September 2019. In just eight hours of travel, Indian and Polish business partners are able to meet more easily in one of the countries. It is important to note, that it is the only direct flight connection with Central Europe.

## Investment

Polish investment in India is the largest among Central and Eastern European Countries. As the 10th largest EU investors Polish FDIs in India are worth a total of USD 250 million at the



end of 2018. This includes the investment made by Polish IT company Billennium in Pune.

Founded in 2003, Billennium is a cutting-edge software company operating globally and specialized in building innovative IT solutions and delivering IT outsourcing services. As the Billennium says: "Our mission is to be a boundless organization that creates solutions that bring both joy and true value to our clients". With over 16 years of experience in managing the various areas of IT expertise for international companies, the company complete projects and perform services worldwide. Currently, they employ more than 1000 specialists, in 7 branches in Poland as well as offices in India (Pune), USA (New York City) and Malaysia (Kuala Lumpur). In the spirit of creating innovative solutions that not only help the business grow but bring an actual value to the environment Billennium has built, among others: Paperless Office, which allows seamless facilitation of business processes and paper flow within the company while reducing the amount of paper used in the organization. They also have Inperly, which is a multichannel communication platform between the company and the customer. Billennium's solution combines the quality and the comprehensiveness of in-branch services while managing the process remotely. The third solution is called Paperless Retail and it is an integrated platform for the retail industry, which allows managing distributed sales network. It combines task management, digital signage, Internet of Things and business intelligence, to deliver added value in the store of the future.



Ada Dyndo

The other successful investments in India include TZMO Group, producer of sanitary textiles and hygiene products, Can-Pack, FMCG packaging industry, Polmorengaged in the manufacture of steel components and accessories, Maflowa producer of parts and components for automobile air-conditioning systems or Seco/Warwick, a company responsible for manufacturing machinery for the booming metallurgical industry. This doesn't come as a surprise, since Polish companies are present in multiple sectors of the Indian economy, such as: waste-management (Ekolog), EVs (Solaris), automation and robotics industry (AIUT), mining machinery and equipment (Famur), furniture (Komandor) and many others.

Last, but not least, the value of Indian investments in Poland is estimated at over USD 3 billion. Poland has become a go-to location for Indian global companies such as Infosys and Wipro and Tata Consultancy Services. The other FDIs include for example Videocon with its LCD plant, Escorts producing cabbed tractors, and sterile manufacturing facility by Strides Arcolab. An interesting example of Indian investment has been made by Rishabh Instruments in Zielona Gora in Poland, which acquired Polish Lumel in 2011. The company plans to open the next factory for electronic products in March 2020. *-Poland has been the highest GDP growing country in Europe and the per capita income is also rising rapidly creating demand for new products"* - explains Narendra Goliya, the owner of the Lumel and Rishabh Instruments from Nasik.

## Export

Polish-Indian collaboration can be also seen in export levels. In recent years, there has been a small but significant rise in bilateral trade between India and Poland. In 2018, Polish exports to India increased by 11%,

reaching USD 819.6 million. For many years, Poland's export to India has been dominated by coke, semi-coke, and retort coal, (USD 251 million in 2018), turbojet engines, turboprops and other gas turbines (USD 52 million), rubber (USD 43 million). As one the EU leaders of the production of fruits, Poland in recent years made its way to export fresh fruits also to India. Since 2019 it can observed increased number of Polish apples, pears and quince exported to India which value has increased by 85% to USD 8.6 million in the first quarter of 2019.

What is also significant, is the fact that for India Poland remains the largest export destination for in the Central European region. The most popular goods imported from India are mainly textiles (worth almost 200 mln USD in 2018), agri-food products (188 mln USD), shoes (139 mln USD), organic

chemical drugs (121 mln USD in 2018) and pharmaceutical drugs (70 mln USD).

Since both economies are experiencing growth and willing to establish stronger trade relations, there is still a significant potential for further economic development.

**Government support**

To support the development of bilateral business relations, the Polish Investment and Trade Agency (PAIH) has its representatives in India. PAIH is a governmental institution that works to increase the inflow of investments to Poland and the outflow of Polish FDI. To offer in direct assistance for business on the site, in 2017 PAIH has established a system of international support all over the world. One of its offices is located in Mumbai, the financial and business capital of India. – "Using administrative

*tools and practical knowledge we try to make Indian market closer for Polish companies. PAIH team in Mumbai works directly with Polish and Indian companies, assisting with B2B meetings, promoting their products" – said Ada Dyndo, PAIH Mumbai Office Head. – Due to the specificity of the local market, is extremely important to have in India the presence of the Polish governmental institution focusing on Poland-India business relations. We would like to encourage companies in Pune interested to cooperate with Polish companies to contact us or meet in Maharashtra – Ada Dyndo concluded.*

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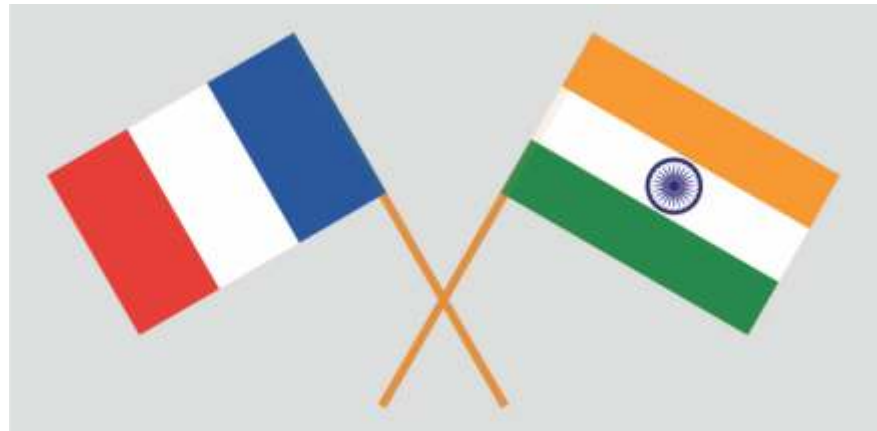
# The Strategic partnership between India and France Choose France



Anshika Khandelwal

**S**trategic partnership between India and France marked its 22nd Anniversary this year. The bilateral trade has increased significantly over the past fifteen years. More than the volume, the dynamism of Indo-French economic relations springs from the establishment of French companies in India as well as Indian companies in France. **The trade relations between the two nations stand strong with exports from France to India around € 5.53 billion in 2018 and imports from India at € 9.6 billion.** Regular meetings between the authorities of India and France nourish an in-depth and long-term political dialogue. The State visit of President Emmanuel Macron in March 2018 marked the remarkable deepening of the of the Indo-French strategic partnership and helped boost the dynamism of our economic, university, scientific and cultural exchanges. In return, President Emmanuel Macron received Prime Minister Narendra Modi on 22-23 August 2019 for a bilateral visit at Château de Chantilly, France after his participation in the G7 Summit in Biarritz from 24 to 26 August 2019.

France is a leading economy open to foreign investors. **France conserved its place as the second most likely destination for investments after Germany, and ahead of the United Kingdom as per the Kantar survey, January 2020.** It the second biggest consumer market in Europe and the world's seventh largest foreign investor. It offers a wide array of business opportunities for investors and has a proven track record of attracting and retaining foreign companies and key talent. Known as a country of entrepreneurs: 691,000 new companies were established in France in 2018 (+17%), among which, 28,500 in the industrial sector. **There are over 150 companies operating in France, where they employ more than 7,000 people. 17**



**investments from India were recorded in France in 2018, creating or maintaining 141 jobs. Investments were mainly made in the software and IT services sector (24% of projects; 30% of jobs), and the machinery and mechanical equipment sector (12% of projects; 21% of jobs).**

On the other side, today, **more than 550 French companies are already present in India** which invest, manufacture, innovate and even export from India; a continuous flow of new investments that places India among the top countries in terms of FDI; more than **350 000 workers employed in French companies across sectors.** France is the 9th largest foreign investor in India with a cumulative investment of **\$6.59 billion from April 2000 to December 2018.** France is the 18<sup>th</sup> commercial partner of India in the world and the 4<sup>th</sup> in Europe whereas it is one of the top 3 foreign investors in India, with more than **20 billion USD of investments.** At the end of 2018, Indo-French bilateral trade stood at 11.52 billion euros, rising by 7.60% over the bilateral trade clocked in 2017.

The Indo-French facet has seen French companies operating in India in multiple fields like services, pharmaceuticals, aviation, food,

electronic, building, electric components and automobiles. Sizeable French groups have successfully opened its passage to the Indian market like Decathlon, Cisco Digital Network Control Systems, BNP Paribas, Safran, Solaire Direct (ENGIE group), Bolloré Africa Statistics, Geodis International and Louis Dreyfus Armateurs. Defence and security, space and civil nuclear sectors constitute the principal pillars of the Indo-French strategic partnership. **India and France are also increasingly engaged in new areas of cooperation, such as climate change, including the International Solar Alliance, and sustainable growth and development, among others.** Besides, Indian industries stand to gain a lot by joining hands with French industries across sectors, like automobile, aviation, pharmaceutical, textile, telecommunication, agriculture and food processing, mineral exploration and development and energy and so on.

#### About Business France:

Business France, the national agency supporting the international development of the French economy, is responsible for fostering export growth of French businesses, as well as promoting and **facilitating international investment in France. It promotes France's companies,**



**business image and** nationwide attractiveness as an investment destination, and runs the VIE international internship program. Business France has 1,500 personnel, in France and in 58 other countries throughout the world, who work with a network of partners.

**Ambition India event, 28<sup>th</sup> April 2020 in Paris:**

*Ambition India is a business forum organized by Business France, that brings together key entities from both France and India. The first edition of Ambition India that took place in 2019 has been very successful with more than 250 French and Indian participants, 61 high level speakers and more than 300 B2B meetings. This new edition – Ambition India 2020 will be inaugurated by H.E. Jean-Yves Le Drian, Minister of Europe and Foreign*

*Affairs and with the support of the French Treasury, the Embassy of France in India, the Embassy of India in France, the Confederation of Indian Industry (CII), Bpifrance, the French Foreign Trade Advisors (CCEF) and many private companies. We are inviting 300 French and Indian private companies, experts, advisers and representatives of government organizations to participate in plenary sessions, thematic and sectoral round tables, networking and B2B moments organized during this day dedicated to India, to be held at the conference center of the Ministry of Europe and Foreign Affairs, in Paris.*

**Ambition India is a unique opportunity to strengthen the Indo-French business and trade relationship, to discover or re-discover the attractiveness of France, to meet**

**Indian success stories in France and French companies doing business with India. Thus, Business France invites you to be part of this Ambition India Forum that will be held on the 28<sup>th</sup> April 2020 in Paris.**

For the Indian companies which are considering setting-up in France and/or re-investing, **a roadshow will follow in Paris' region on 29<sup>th</sup> of April and in Normandy on 30<sup>th</sup> of April 2020.**

If you are interested to participate to Ambition India 2020 and its roadshow, please register at the following link: <https://events-export.businessfrance.fr/ambition-india>

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or  
Mr. Pramod Potbhare, Manager-MCCIA over email : [pramodp@mcciapune.com](mailto:pramodp@mcciapune.com), Tel. : 020-25709222  
Email : [sampada@mcciapune.com](mailto:sampada@mcciapune.com)

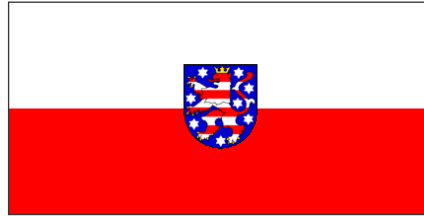
# Thuringia MCCA Business Summit



Mike D. Batra

The Free State of Thuringia is one of the 16 Federal States of Germany, located in the centre of Germany, right in the heart of Europe. Thuringia is among the most interesting business and research locations in Europe, with an especially strong foothold in high-tech sectors such as life sciences, optics, optoelectronics and photonics, automotive and aerospace. Over generations, Thuringian manufacturers have built a strong reputation for their German quality products, such as Carl Zeiss AG in optics and optoelectronics or Jena-Optronik GmbH in aerospace.

Thuringia offers excellent conditions and significant government support for foreign investors. There are 290 million potential customers within a radius of 800km, accounting for more than 70 % of Europe's purchasing power. Therefore, while India has a strategic location for the entire region of South and South East Asia, Thuringia can serve as a major distribution and logistics hub for Indian companies in the centre of Europe and accessing the markets of the European Union.



Thuringia and India have a long established and growing relationship in business, science and culture, which goes far beyond the many business meetings, delegation visits and trade fair participations of the recent years. Rabrindranath Tagore, the Nobel Prize laureate in literature, was very interested in the young school of architecture of 'Bauhaus' of Walter Gropius as early as 1920. It is thus no wonder that the first 'Bauhaus' exhibition outside Germany took place in Calcutta in the year 1923!

Just like Pune, the „Oxford the East” in India, the State of Thuringia is also a major hub in Germany with many renowned universities and scientific institutions. In no other region of Germany, one will find as many university students taking degrees in the natural sciences, engineering and

business management as in Thuringia. This is also one of the reasons why the State of Thuringia has one of the highest rates of industrialisation in Germany!

In the past three years, various high-level political and business delegation visits from Thuringia to India have been undertaken, most recently in February 2019 with one led by the Thuringian Minister of Economics Mr. Wolfgang Tiefensee and another in September 2019 led by the State Secretary of Economics, Mrs. Valentina Kerst, with many Thuringian companies participating and visiting India for the first time. Since 2016, more than 60 Thuringian companies have started business activities with India. Two of the delegations also came to Pune, with good support by the MCCA and meeting many of its members.

As the business promotion agency of the state of Thuringia, the 'LEG Thuringia / Thuringia International' supports Thuringian companies to enter the Indian market as well as Indian companies investing in Thuringia. 'Thuringia International' has a designated Representative for India, Mr. Mike D. Batra and a Representative Office of 'Thuringia International' in New Delhi, which was inaugurated in 2016 by the then State Secretary for Economics of Thuringia, Mr. Georg Maier.

'Thuringia International' and the participating companies from Thuringia, namely DECON, GBneuhaus and GRAMME-REVIT, are looking forward to being part of the high-profile 'MCCA International Business Summit 2020' and thereby further enhancing the good business ties especially to companies in Pune and Maharashtra.

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# Pune and Pennsylvania : Special Business Relations



Supriya Kanetkar

## Pennsylvania and Pune : Many parallels

Pune, the second largest city in the state of Maharashtra and Pennsylvania, the 5th-most populous state in the United States of America share several parallels.

Historically, Pune is considered to be the cultural capital of Maharashtra and also the birth place of social reformers and Indian Renaissance. Also, the national freedom movement against the British rule began in Pune.

Located on the Northeast coast of the United States, State of Pennsylvania is often called the birthplace of U.S. democracy. Declaration of Independence was signed in Philadelphia, Pennsylvania. The Liberty Bell was rung. President Abraham Lincoln delivered the famous Gettysburg Address in 1863, in Pennsylvania.

## Rich history – rooted in democracy and religious freedom

The history of Pennsylvania begins in 1681 when William Penn received a royal deed from King Charles II of England. William Penn founded Pennsylvania as a safe place for Quakers to live and practice their faith. William Penn advertised for settlers, explaining that Pennsylvania would be democratic, tolerant of all religions, and a place where people from all walks of life would be welcome.

Drawn by this religious freedom and by abundance of the fertile land, immigrants soon arrived in droves. Mennonites, Amish, Quakers, and small sects built communities and worked homesteads. The development of industry followed, and coal, iron, and steel was soon flowing out of the region by canal and newly built rail lines.

Agriculture, commerce, and the production of iron brought prosperity to

the Keystone State during the 18<sup>th</sup> century; manufacturing, mining, and rail transportation solidified its role as a world leader in the 19<sup>th</sup> century, the industrial age.

As Pennsylvania begins the new millennium, the smokestacks that once symbolized its prosperity have been replaced by sleek industrial parks peopled with high technology innovators -all reflecting the Commonwealth's clear path to the future.

## Location, well developed infrastructure and educational institutes :

Pune's proximity to Mumbai, the financial capital of India has helped the city grow and offer enormous business opportunities to growing industries. Pennsylvania's location on the north east of USA provides a great competitive advantage to entrepreneurs. Pennsylvania is located in between Washington D.C., the policy makers and New York, the financial capital, making it a desirable place to do business.

Pennsylvania also offers a robust infrastructure with 6 international airports, three major ports and a network of interstate highways and modern freight railroads.

Pune is well-known as an important Center of Education and Research Institutes.

Pennsylvania is also home to some of the top ranking educational institutes in the US. These Universities provide qualified workforce for the industry and contribute to innovation.

University of Pennsylvania, one of the Ivy League Universities was founded in 1740, prior to the U.S. Declaration of Independence. The other renowned educational and research institutes include: Pennsylvania State University, Drexel University, Temple University, Carnegie Mellon University, University of Pittsburgh, Lehigh University to name a few.

University of Pennsylvania and University of Pittsburgh at Pittsburgh are among the top ten in the US for NIH (National Institute of health) funding and provide a great pool of break through research. Other prominent Research Institutes include, the Wistar Institute, Fox Chase Cancer Center in Philadelphia.

## Industries :

Pennsylvania has a diverse economy which brings opportunity and stability to business community. The State has vibrant life science, industrial, plastics, ICT and Electronics, Food, Beverage processing, advance manufacturing, energy, and service sectors. Many of these sectors find a resonance in economic environs of Pune.



Manufacturing has formed Pennsylvania's past, present, and future – making it a significant component of Pennsylvania's economy and its heritage. From companies focused on medical devices and organic foods to nanomaterials and fabricated metal products, Pennsylvania has successfully applied its workforce's skilled approach, established infrastructure, and in-state resources to modern manufacturing.

Pennsylvania's reputable agribusiness industry represents more than two centuries of heritage and quality and is a leading economic driver across the state, producing quality products — like food and hardwoods — from farm to table and forest to factory. Pennsylvania leads the nation in food-processing companies, with more than 2,300 operating across the state.

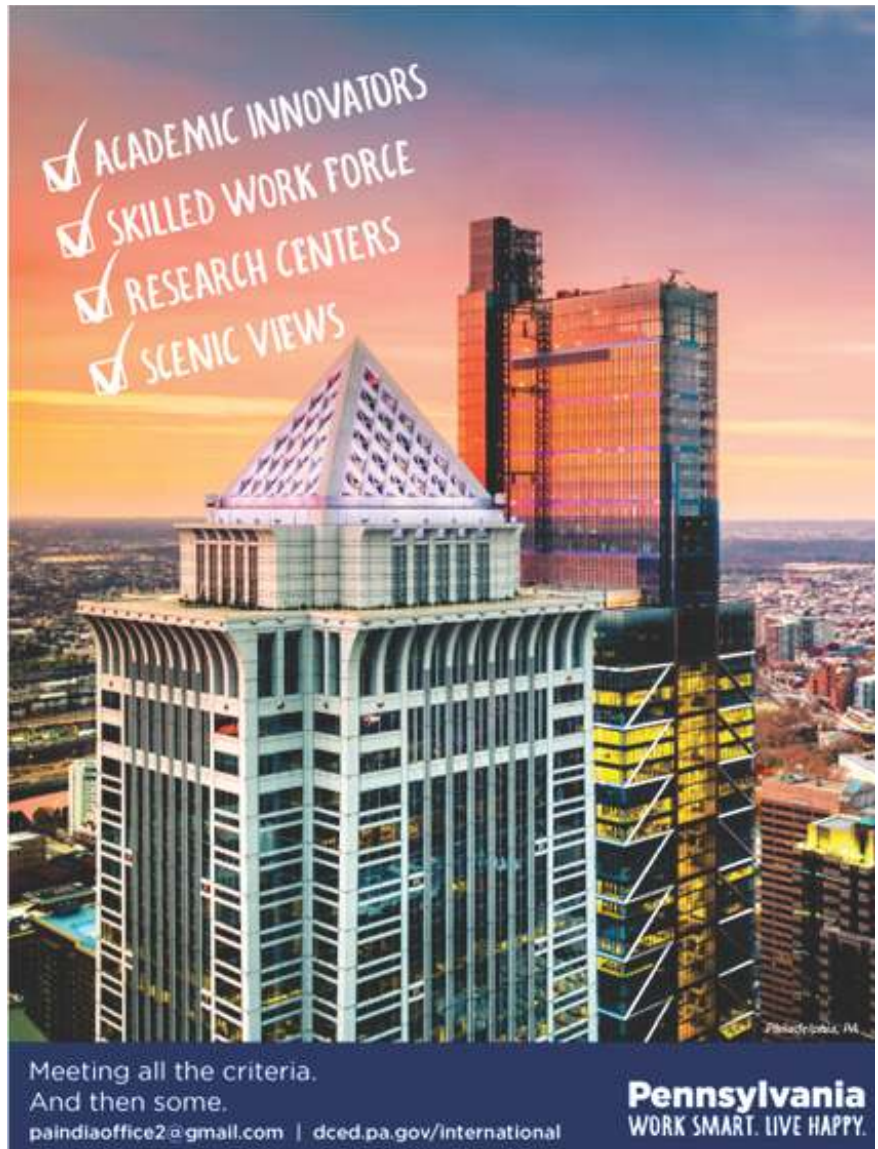
At the heart of the life science industry in Pennsylvania is a legacy of innovation that began with a strong presence of global pharmaceutical companies and has continued to grow and evolve. Today, Pennsylvania boasts not only global pharmaceutical companies but also a strong community of emerging companies and mature industry. Centocor, MedImmune, AstraZeneca's global biologics research and development arm, Philips Respironics are fueling the growth of life sciences in Pennsylvania.

The other prominent companies that have found a place in Pennsylvania's business community include: Glaxo SmithKline, BAE, B. Braun, Bayer, Gruma Corp, Nissin Foods, Toshiba, Olympus, Teva and Foxconn.

With all the synergy that is mentioned earlier, we believe there are several opportunities for Pune based companies to explore new business opportunities in Pennsylvania.

**Office of International Business Development:**

The Pennsylvania Office of international Business Development offers customized services to help international companies looking to locate or expand in Pennsylvania. Our team is committed to eliminating



barriers so that companies can invest, expand and operate their business with ease in Pennsylvania. Our suite of complementary and confidential services includes:

- Helping you set up a U.S. business entity
- Identifying and visiting business sites
- In-depth research on available workforce, infrastructure, taxes, and more
- Introductions to regional and local economic development partners and elected officials
- Customized financial assistance —

including grants, low-interest loans, tax credits, bond financing, and job training.

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# MCCIA's Leadership Summit - Succeeding in Difficult Times



The 5th edition of the Leadership Summit was held on Thursday 20<sup>th</sup> February 2020. The summit was well attended by business owners, entrepreneurs and corporate luminaries who articulated their experiences, dilemmas they faced and how they overcame these critical junctures in their businesses and careers. The success of the summit was evident from large gathering and the keenness of all the participants.

The summit began with an address by Mr Pradeep Bhargava, President MCCIA, who welcomed all the guests. He spoke about the challenges that face the nation, industry and the common man while on the journey of economic prosperity. He specially mentioned that success is inevitable, when you want to

achieve your aspirations.

The next speaker was by Dr Ganesh Natarajan, Chairman, 5F World, Global Talent Track, Pune City Connect, and SVP India who outlined the leadership summit as a series of interesting experiences from renowned speakers and there was plenty to learn from for everyone.

The first corporate luminary was Mr Sanjiv Bajaj, MD & CEO Bajaj Finserv in conversation with Mr. Pradeep Bhargava speaking on the topic *Winning in Turbulent Times*. Proud about the growth of Bajaj Finserv, he was very candid and lucid about his winning strategies. He spoke of how he has avoided short term opportunities as he believed that they were merely

distractions from the long term goal. Pricing cannot be the basis of a competitive strategy. In fact it has to be innovation. He also spoke of preparing for the bad times during the good times, building differentiation and empowerment of employees at every level as some of the key reasons for the stupendous success of Bajaj Finserv.

The next speaker was Mr. Annaswamy Vaidheesh, Managing Director, Glaxo SmithKline Pharmaceuticals Ltd. India in conversation with Ms. Vandana Saxena Poria, OBE on *Ethical Dilemmas in Decision Making*. He spoke about the various critical decisions that he had to take on issues that challenged the ethics of the company and he never shied away from taking them. He gave

the example of the recall of Rantac, a popular medicine for acidity, when there was a belief in the public that it had ingredients that caused cancer. There were times that the company suffered financial losses, but that did not deter them from their commitment to ethical practices. Even a small deviation from the standard operating procedures laid down was not accepted even it meant closing down a facility.

The next speaker was Dr. Mukund Govind Rajan, Chairman, ECube Investment Advisors who spoke at length on his experiences while he was with the Tata group, particularly about the challenges faced when Mr Ratan Tata took over as the Chairman. He spoke about how he brought about a cohesive structure to the entire group under the Tata brand. Each company was mandated to sign the code of conduct that was formalized by Mr Ratan Tata. The Tata Code of Conduct outlined commitment to stakeholders and was a guiding light when faced with business dilemmas.

Next in line were the young turks, Ms Rama Kirloskar, Managing Director of Kirloskar Ebara Pumps Limited (KEPL) and Mr Alok Kirloskar, Managing Director - SPP Pumps Limited, UK in conversation with Mr Prashant Girbane,

DG, MCCIA. With an impressive lineage resting on their young shoulders, they vowed the audience with the achievements of the companies under their leadership. For example, Alok Kirloskar mentioned that most of the important buildings in the world have at least one Kirloskar pump, an example being the Burj Khalifa. 'Other than profit, we have to make an impact to the society, is what I was first taught about', said Rama Kirloskar, MD Kirloskar Ebara Pumps Ltd. They also spoke about the introduction of new technologies like AI, Machine Learning and IoT in their companies which are helping them to move to the next level.

Mr. Sudin Sabnis, Director - International and Direct Tax, Nangia Andersen Consulting, one of the sponsors gave an effective presentation about navigating *Through Challenging Times from Tax Point of View*, particularly with reference to the various new policies that the government had introduced.

The next speaker was Mr Kunj Tibrewal, CEO & MD Infoworld, another sponsor of the event. He spoke on the need of digital innovation and how their services help small and medium sized companies in implementing ERP systems.

To take centre stage next was the very dynamic Mr Hemant Jalan, Managing Director at Indigo Paints, in conversation with Ms Vandana Saxena Poria. He spoke about his inspiring journey from when he started out after his education. He recalled how his chemical business in an area of Jharkhand (previously part of Bihar) had hit rock bottom and how he had risen up like the proverbial phoenix by spotting a new opportunity - cement paint. His stints of a paid job in between his entrepreneurship because he could not sustain the family, did create a comfort zone, but he gave it all up to manage his business once again.

The day concluded with Dr. Ganesh Natarajan in conversation with Ms Mridula Sankhyayan, CEO Global Talent Track and Mr Narendra Goidani, Founder of Life School on 'Pathways to inspirational leadership'. Each of them shared anecdotes highlighting their experiences during their careers.

The convenors of the event were Dr. Ganesh Natarajan and Vandana Saxena Poria OBE

The summit ended with a vote of thanks by Mr. Pradeep Bhargava, President MCCIA.

Thursday, 20<sup>th</sup> February 2020





# MCCIA's Industry 4.0 Summit



MCCIA had organised The Industry 4.0 summit on 4<sup>th</sup> February 2020. The summit was intended to create awareness on how latest digital technologies can bring about a transformation in processes and systems and would immensely benefit the manufacturing ecosystem in Pune. As expected, it received an excellent response with the participation of industry stalwarts, delegates from countries like Germany and South Korea, CEOs of manufacturing companies and exhibitors.

Mr Prashant Girbane, Director General-MCCIA welcomed the guests and audience. He highlighted the unique attributes of Pune city. It has the highest number of students, national research institutions and the highest number of German companies in the country. Pune is also a vibrant manufacturing hub, tech cluster with many cyber companies. He spoke about the state of Industry 4.0 with respect to SMEs. He felt that SMEs were still hesitant to adopt Industry 4.0 and it was likely that

awareness was needed and perhaps they did not know how to go about it. He expressed his view that this seminar would help to create awareness about Industry 4.0. He also briefed the participants about a unique effort on part of MCCIA wherein the Chamber studied the level of preparedness of select MSMEs in Pune region on the way to Industry 4.0.

Dr. Anand Deshpande, Founder, Chairman and Managing Director - Persistent Systems delivered his opening remarks. He stated that Pune was a natural choice for Industry 4.0. He thanked Dr Karim Yusuf, General Manager, AI Applications, IBM for having come all the way from San Francisco to Pune to address the seminar. He also praised MCCIA for being an action oriented Chamber rather than discussion oriented.

In his Special Address, Dr Jürgen Morhard, Consul General, Federal Republic of Germany spoke about the

close relationship between Germany and Pune. The linkages included 300 German companies, academics and linguistic research happening in Pune. He also spoke about the partnership between Pune and Karlsruhe and that the partnership brought all stakeholders together to benefit each other. He spoke about the need to deploy a forward looking policy to remain at the top of manufacturing sector. He also championed for establishing platforms, where all stakeholders including companies, associations, academics and policy makers can come together and have dialogue on driving the 4.0 revolution forward. He concluded his address with a promise of fostering long-standing partnerships moving ahead.

Dr Karim Yusuf, General Manager, AI Applications, IBM delivered the Keynote on this occasion. He gave an extremely informative presentation. He pointed out that at the root of the 4.0 discussion is a fundamental motive of

reducing costs and increasing efficiency, as well as enabling decision making by providing intelligent insights. He spoke on how digital reinvention is occurring in asset intensive industries. It is changing the operating model in a disruptive way as assets are becoming connected. He gave examples of how mines being operated by robots, driverless cars, equipment predicting their own future, buildings becoming smarter and efficient. Connected systems in manufacturing were leading to IOT guys vs the IT guys. By leveraging cloud, the Edge and AI there would be value creation. Asset maintenance and operations would be about understanding and managing maintenance, monitoring by detecting anomalies, managing the health of the asset and predict failures by using data. He spoke about the connected technicians of the future who would use AI, wearable biometrics, have diagnostic interfaces, augmented reality, a mobile workspace and safety sensors. Having spoken about the growing interconnectivity of machines, he moved the discussion towards humans behind the machines. He highlighted the need to apply human understanding to extract meaning from data. He concluded by saying, *“Technology is the means to an end; companies must focus on the end they wish to achieve”*

Dr Aravind Chinchure, Founder and CEO of QLeap Academy presented the

highlights of MCCIA's Industry 4.0 report. He said that Pune can become the hub for Industry 4.0 because of the advantages like a vibrant manufacturing industry, established IT and engineering services industry, premier research institutions, leading universities and colleges and an emerging start up hub. However there was a need for horizontal and vertical integration across the industry. He talked about the world class capabilities that India by citing the example of Lalitesh Katragadda who was the creator of Google Maps, India. He ended his presentation with the hope that Industry 4.0 establishes a strong base in India, as Industry 5.0 is not very far behind.

This was followed by the release of two MCCIA publications. The February issue of Sampada that focused on Industry 4.0 and the report - **Pune: Industry 4.0 Capital of India in the making**. This report is authored by Dr. Aravind Chinchure.

The first technical session was chaired by Mr Vishwas Mahajan, Co-Chairman IT, ITES, Innovation and Incubation committee, MCCIA. Mr R. Venkateshwaran, Senior VP, IoT Solutions, Persistent Systems. Spoke about how Industry 4.0 is a mindset transformation and digital technology is the key enabler. He highlighted the challenges faced by manufacturing companies and how digital continuity

would be the key to transformation. It was followed by Mr Nitin Bhosale, Managing Director Magic Software Enterprise who spoke on the products for Industry 4.0 which helped in Fast Integration, Data Intelligence and Digital Transformation. His talk was followed by exhibitors Beauto Systems, Entrib Analytics Technology and PCITs making their presentations.

Mr. Tae Yo Song-Researcher at the Jeanbuk Science and Technology Promotion Centre expressed their admiration about Industry 4.0 efforts in India as well as by MCCIA and said that there was a very big potential for business between Maharashtra and Korea in the coming years.

Mr Vishwas Mahajan closed the session with his observations that solutions could be found and that the trust deficit faced by SMEs can be easily bridged when there is a clear articulation of the problem.

The next session was for international delegates. Mr Prashant Girbane introduced the dignitaries that included Hon'ble Dr Frank Mentrup, Lord Mayor of Karlsruhe who led the delegation from Karlsruhe, Hon'ble Theresa Schopper, Minister for Policy Co ordination, Baden Wurttemberg State, Germany. She made a presentation on Baden Wurttemberg State which was the centre for 3 Ms – Mobility, Medicine and Mechanical Engineering. She drew



parallels between Pune and Baden Wurttemberg.

The international session attained much significance with the signing of an MOU amongst Mr. Ajay Mehta, Managing Director, Praxis Project Engineers, Karlsruhe Institute of Technology, National Chemical Laboratory and Ineratech GmbH.

The next speaker was Dr Kai Schmidt Eisenlor, Managing Director, Schweickert Netzwerktechnik GmbH. His presentation focused on the security aspect of Industry 4.0. He said that security was all important in a digitised world.

Mr Sven O Rimmelspacher, Managing Director, Pickert& Partner GmbH spoke about leveraging quality of Indian manufacturing with Industry 4.0. His presentation focused on how defects lead to increased cost and how software solutions can enable Indian companies a zero defect manufacturing system.

Ms Sanika Sonawane spoke on behalf of IRTI Robotics and Sonteva GmbH. This was followed by a presentation by Ms Anandilyer, Director of Fraunhofer, India. Fraunhofer is a leading organization for applied research in Europe and it had signed significant MOUs with leading Indian research institutions and organisations and is working in collaborations with

various ministries of the central government.

The second Technical Session was chaired by Mr AnandParanjape, Co-Chairman IT, ITES, Innovation and Incubation committee, MCCIA. The first speaker was Mr Hemant Kank, Managing Director, Yeshshree Press Comps. He presented a case study. Next, exhibitors Infinity Automation Systems, InnovaPointInfotech, Kneo Automation, San Techno Mentors, Shyena Tech Yarns presented their capabilities.

Mr Amit Paranjpe summed up with his closing remarks. He said that Industry 4.0 journey is very interesting and exciting. Enterprise software focuses on solving problem and one should keep the focus on improving processes.

The third Technical Session focussed on the scope for collaborative efforts among Industry – Academia and Research organisations. Wynum Automation Services, eMaestro Technologies presented their credentials. Prof Dr KarstenWendland, Head of BMBF Project, Karlsruhe Institute of Technology gave an interesting presentation called Expectations of AI Consciousness. He showed how AI had entered the political arena. Robot Sophia acquired the citizenship of Saudi Arabia. She also spoke with German Chancellor Angela Merkel. The

exponential growth in computer technology can be witnessed as films and music are embracing robotics. He gave an insight about how AI will develop with a weak AI that includes speech recognition, chess, pattern and object recognition etc. The next level is a strong AI where AI has the same intellectual capabilities as humans, and can transfer conclusion to other areas, think and act in system breaks and finally super intelligence that is a new form of existence that goes beyond man developing own structures independently leaving mankind behind.

The next speaker was Mr Chris Wiseman, Industry Sector Manager, TWI. TWI is an organisation that works with 40 universities all over the world. Their mission is to deliver world class services and impartial advice in joining materials and associated engineering technologies to meet the needs of the industry. He praised ISRO on their cost efficient space exploration.

Mr Harshit Desai, Head Innovation Program, MIT Institute of design spoke on the integration of Design, Humanities, Business and Technology disciplines.

The session came to a close with Mr Amit Paranjape felicitating the guests. Mr Sudhanwa Kopardekar, Director, MCCIA presented the vote of thanks.







# अर्थसंकल्प २०२०

सी.ए. चंद्रशेखर चितळे



**अ**र्थसंकल्प सादर करताना अर्थमंत्री मागील वर्षाच्या कारभाराचा आणि घेतलेल्या निर्णयांना मिळालेल्या प्रतिक्रियांचा विचार करतात.

डिसेंबर २०१९ अखेर संपलेल्या नऊ महिन्यात खर्च-जमेतील तफावत रु. ९.३२ लाख कोटी म्हणजेच संपूर्ण २०१९-२० साठी अंदाजीत तुटीच्या लक्षाच्या १३२% एवढी झाली. अर्थव्यवस्थेला उभारी देण्यासाठी गेल्या सप्टेंबरमध्ये सरकारने कंपनी करांच्या दरामध्ये घसघशीत कपात केली व त्यामुळे गंगाजळीस रु. १.४५ लाख कोटीचा फटका बसेल अशी अपेक्षा होती. प्रत्यक्ष करांच्या संकल्पामध्ये आर्थिक क्षेत्रामधील मंदी आणि घटलेले करदर यामुळे २०१९-२०साठी अपेक्षित ७.६६ लाख कोटी रुपयां ऐवजी वर्षाअखेरीस रु. २.४९ लाख कोटी जमा तर वैयक्तिक करांसाठी हेच आकडे अनुक्रमे रु. ५.६९ लाख कोटी व रु. २.१३ लाख कोटी राहिले.

या पार्श्वभूमीवर कंपनी करदरामधील कपातीनंतर उत्पन्न झालेली वैयक्तिक करांच्या दरामधील कपातीची आशा अंदाजपत्रक सादरीकरणाच्या पूर्वसंध्येस धूसर झालेली दिसत होती. त्यामुळेच, करदात्यांच्या मनामध्ये आयकर विषयक कोणते प्रस्ताव येतील, आयकराचा दर काय राहील ही उत्सुकता सहाजिकच होती.

या लेखामध्ये अर्थसंकल्प २०२० मधील आयकर विषयक प्रस्तावांचा विचार केला आहे.

## कंपनी कराचे दर

गेल्या सप्टेंबर २०१९ मध्ये कंपनी करदात्यांना प्रोत्साहन म्हणून आयकराचे दर खूपच कमी केले. भारतीय कंपन्यांना काही वजावटी व सवलतींचा त्याग केल्यास २२% ने आयकर भरण्याचा विकल्प

उपलब्ध आहे.

नव्या तरतुदीनुसार नव्या उत्पादन क्षेत्रामधील कंपन्यांना अतिरिक्त सवलतीचा १५% आयकराचा दर उपलब्ध आहे. या संदर्भामध्ये वीजनिर्मिती करणाऱ्या कंपन्यांना देखील ही अतिरिक्त सवलत उपलब्ध व्हावी अशी मागणी आली. तिची उपयुक्तता लक्षात घेत वीजनिर्मितीसाठी स्थापन झालेल्या नवीन कंपनीस १५% आयकराचा सवलतीचा दर उपलब्ध करून दिला आहे.

उर्वरित कंपन्यांना आयकराचा दर २५% हा कायम राहील. परंतु रु. ४०० कोटीपेक्षा २०१७-१८ची उलाढाल अधिक असल्यास करदर ३०% राहील.

## लाभांश कर

कंपन्यांनी आपल्या भागधारकांना लाभांश जाहीर केल्यास त्यावर १५% दराने लाभांश वितरण कर भरावा लागतो. या तरतुदीवर कंपनी क्षेत्राकडून दुहेरी कराचा आक्षेप घेतला जात होता. या आक्षेपाची दखल घेत १ एप्रिल २०२० नंतर जाहीर होणाऱ्या लाभांशावर कंपनीस 'लाभांश वितरण कर' भरावा लागणार नाही.

हा कर भरल्यानंतर समभाग धारकास मिळणाऱ्या लाभांशावर कोणताही आयकर भरावा लागत नाही. रु. १० लाखापेक्षा अधिक लाभांश मिळाल्यास त्यावर भागधारकास आयकर लागू होतो.

लाभांशावर कंपन्यांना भरावा लागणारा कर रद्द झाल्यानंतर मिळालेला लाभांश संबंधित भागधारकांच्या करपात्र उत्पन्नामध्ये समाविष्ट होवून त्यावर आयकर आकारणी होईल. या तरतुदींचा विशेष लाभ परकीय गुंतवणूकदारांना होईल. कारण भारतामधील करमुक्त लाभांशांवर परदेशात कर लागू होता. आता परदेशातील करामधुन भारतामधील कराची वजावट मिळेल व त्यामुळे ते भारतामध्ये

गुंतवूणक करण्यास आकर्षित होतील.

म्हणूनच प्रस्तावित प्रस्तावाचे स्वागत करावे लागेल. अर्थात, कंपनी देय लाभांशामधून आयकर कपात करण्यास बांधील राहतील.

### कंपनी का मर्यादित भागीदारी ?

भागीदारी संस्थांना ३०% ने आयकर भरावा लागतो. कंपन्यांना २५% किंवा २२% किंवा १५% ने आयकर भरावा लागतो. आजवर, कंपन्यांना आयकर व त्यावर १५% दराने लाभांश वितरणकर भरावा लागत होता. आता तो रद्द झाला आहे. त्यामुळे परत विचार सुरु होईल की धंदा भागीदारीत करावा की कंपनी माध्यमाने करावा ?

कंपन्यांना कमी दराने कर भरावा लागतो. परंतु भागधारकांना मिळालेल्या लाभांशाचा समावेश त्यांच्या करपात्र उत्पन्नामध्ये होईल व त्या रकमेवर आयकर भरावा लागेल.

या उलट, भागीदारी किंवा मर्यादित भागीदारीस (एलएलपी) केवळ ३०% दराने आयकर भरावा लागेल. हा कर भरल्यानंतर भागीदारांना वाटला जाणारा नफ्याचा हिस्सा हा संपूर्णपणे करमुक्त आहे. त्यामुळे बारकाईने विचार केल्यास बदललेल्या परिस्थितीमध्ये देखील भागीदारी माध्यमातून व्यवसाय केल्यास आधिक फायदा खिशांमध्ये जाईल. या व्यतिरिक्त भागीदारी माध्यमाने व्यवसाय करताना कंपनीस लागू असलेल्या जाचक आटीचे पालन करावे लागत नाही.

### कंपन्यांना सवलत

एखाद्या भारतीय कंपनीस दुसऱ्या कंपनीकडून लाभांश प्राप्त झाल्यास, लाभांशाच्या रकमेची करपात्र उत्पन्नामधून संपूर्ण वजावट प्राप्त होईल.

### हिशेबी तपासणी

अंदाजपत्रक सादर करताना अर्थमंत्र्यांनी प्रतिपादन केले की 'धंदा करणाऱ्या करदात्यांना एक कोटीपेक्षा अधिक विक्रीची उलाढाल असल्यास आयकर कायदानुसार हिशेब तपासणी करून घेणे अनिवार्य आहे. लघु व मध्यम उद्योगांवरील कायदापालनासाठीचे अतिरिक्त ओझे कमी करणे गरजेचे आहे. त्यासाठी मी हिशेब तपासणी करण्यासाठी असलेली रुपये एक कोटीची मर्यादा रुपये पाच कोटी पर्यंत वाढवीत आहे. त्या व्यतिरिक्त रोकडविरहित अर्थव्यवस्थेस उत्तेजन देण्यासाठी या सवलतीसाठी पात्र ठरण्यास धंद्यामधील रोख व्यवहार ५% पेक्षा कमी असावे लागतील.'

अर्थसंकल्पामध्ये हिशेब तपासणीसंदर्भात कलम ४४एबीची तरतुद आहे ती बदलण्याचा प्रस्ताव आहे. प्रचलित कायदानुसार धंद्याची उलाढाल रुपये एक कोटीपेक्षा अधिक असल्यास आयकर कायद्याची हिशेब तपासणी सक्तीची आहे. अर्थात, उलाढाल दोन कोटीपर्यंत असली आणि किमान ८% नफा किंवा बँका व क्रेडिट कार्डने व्यवहार केल्यास किमान ६% नफा घोषित केल्यास हिशेब तपासणी लागू नाही.

प्रस्तावानुसार, धंदा करणाऱ्या व्यक्तीस आयकरची हिशेब तपासणी लागू होण्यासाठी असलेली मर्यादा पाच कोटी राहिल. परंतु, त्यासाठी खालील दोन अटीची पूर्तता करावी लागेल.

१. विक्रीच्या उलाढालीसह वर्षभरामध्ये जमा झालेल्या सर्व

रकमेच्या ५% पेक्षा अधिक रक्कम रोखीने घेतलेली नसावी आणि ;

२. खर्चासहित आदा केलेल्या सर्व रकमेच्या किमान ५%पेक्षा अधिक रक्कम रोखीने आदा केलेली नसावी.

वरील दोनपैकी कोणतीही एक अट पूर्ण न केल्यास आयकराच्या हिशेब तपासणीसाठी उलाढालीची मर्यादा रुपये एक कोटी एवढीच राहिल.

सीए, वकील, डॉक्टर, इंजिनियर, आर्किटेक्ट इ. व्यवसायिकांसाठी वार्षिक मिळकत रुपये ५० लाखापेक्षा अधिक असल्यास आयकराची हिशेब तपासणी करणे सक्तीचे आहे. या तरतुदीमध्ये कोणताही बदल झालेला नाही.

परिस्थितीचा विचार केल्यास, आजही ग्रामीण भागामध्ये तसेच काही प्रमाणामध्ये शहरी विभागात मोठ्या प्रमाणात व्यवहार रोखीने होतात. उदाहरणेच पहायची झाल्यास हॉटेल, रेस्टॉरंट, किरकोळ विक्रेते, साड्या, कापड, तयार कपडे, फुटकळ वस्तुंची विक्री, स्टेशनरी, कटलरी, किराणामाल, औषध इ. वस्तुंच्या विक्रीची दुकाने मोठ्या प्रमाणातील विक्री रोखीने होत असल्याचेच सांगतील. तसेच मेकॅनिक, टेलर, कटींग सलून, धोबी, गिरणी इ. सेवाक्षेत्रामध्ये रोख व्यवहारांची संख्या व प्रमाण अधिक असते. हे प्रमाण थोड्या कालावधीमध्ये कमी होणे कठीण आहे. घाऊक बाजारपेठेत देखील ग्रामीण व बाहेरगावचे विक्रेते रोख रकमेनेच खरेदी करित असतात.

म्हणूनच ५% पेक्षा अधिक व्यवहार रोखीने नसावेत ही तरतुद योग्य दिशेने उचललेले पाऊल असले तरी तशी आज वस्तुस्थिती नसल्याने हिशेब तपासणीसाठी रुपये पाच कोटींच्या सवलतीस बहुसंख्य धंदे पात्र ठरणार नाहीत.

तसेच, धंद्यांना बँकांकडून कर्ज व पतपुरवठा घ्यावा लागतो. त्यामुळे कर्ज घेण्यास पात्र ठरण्यासाठी हिशेब तपासणी करून घेणे आवश्यक ठरते. एकंदर पाहता, ही सवलत फसवी आणि आजच्या परिस्थितीमध्ये बहुसंख्य करदात्यांना गैरलागू ठरेल.

### बोगस नोंदी

हवाला व्यवहार, खोट्या नोंदी करून आयकर चुकविणाऱ्यांसाठी मोठ्या दंडाची तरतुद प्रस्तावित आहे. खोटे बील नोंदविणे, नोंद गरजेची असताना टाळणे अगर खोट्या वा अस्तित्वामध्ये नसलेल्या माणसाच्या नावे नोंद करणे या गुन्ह्यांसाठी नोंद केलेल्या रकमे एवढा अगर नोंद टाळलेल्या रकमेएवढा दंड भरावा लागेल.

### अर्थसंकल्प व सहकारी संस्था

सप्टेंबर २०१९ मध्ये कंपन्यांना प्रोत्साहन देण्यासाठी आयकराचा दर कमी करून २२% केला गेला. त्यामुळे कंपन्यांना नक्कीच प्रोत्साहन मिळाले. परंतु या प्रोत्साहनाच्या उत्साहामध्ये काही क्षेत्रांवर अन्याय झाला यामध्ये सहकारी संस्थांचा प्रामुख्याने विचार करावा लागेल.

सप्टेंबर २०१९ पूर्वी सहकारी संस्था व कंपनी करदाते दोघांनाही ३०% आयकराचा दर होता. कंपनीचा दर घटवून २२% झाला. त्यामुळे या अर्थसंकल्पामध्ये सहकारी संस्थांचा दर देखील २२% एवढा करण्यात आला आहे.

परंतु, सहकारी संस्थेस कमी झालेला सवलतीचा आयकर दर लागू होण्यासाठी कंपनीप्रमाणेच खालील अटीचा स्विकार करावा लागेल.

१. अनुमतीत तोटा विलीनीकरणामुळे प्राप्त होणारा घासारा, अन्य सवलती व वजावटी घेता येणार नाहीत.
२. वजावट प्राप्त न झालेला घासारा हा सदर मालमतेच्या पुस्तकी किंमतीमध्ये सामविष्ट हाईल.
३. आंतरराष्ट्रीय आर्थिक सेवा केंद्रासाठी लागू असलेली कलम ८० एलएची वजावट प्राप्त राहिल.
४. सर्व अटी पूर्ण कराव्या लागतील.

साधारणपणे बँक व साखर कारखाने वगळता सर्व सहकारी संस्थांना व्यावसायिक व अन्य काही उत्पन्नाच्या १००% एवढी वजावट कलम ८० पी नुसार उपलब्ध आहे. त्यामुळे सर्वसाधारण सहकारी संस्थेस या सवलतीच्या आयकर दराचा कोणताही लाभ संभवत नाही.

परंतु सहकारी साखर कारखाने व सहकारी बँकांना ३०% ऐवजी २२% ते आयकर भरण्याची सवलत घेता येईल कारण त्यांचे उत्पन्न कलम ८० पीच्या वजावटीस पात्र ठरत नाही.

### उत्पन्नामधून आयकरकपात

उत्पन्न लपविले जाऊ नये आणि सरकारी तिजोरीमध्ये सतत पैसे जमा व्हावेत यासाठी उत्पन्न आदा करण्यापूर्वी करकपात करण्याची तरतुद आहे.

नैसर्गिक व्यक्ती व हिंदू अविभक्त कुटुंबास कररूपात करण्याची तरतुद काही कलमांनुसार लागू आहे. परंतु लहान करदात्यांना याचा जाच नको म्हणून ही तरतुद आयकर कायदानुसार हिशेब तपासीणीची मर्यादा रुपये पाच कोटीपर्यंत वाढविल्याने सवलतीच्या या कलमामध्ये बदल केला आहे. प्रस्तावित बदलानुसार नैसर्गिक व्यक्ती व हिंदू अविभक्त कुटुंबास खालील उत्पन्न प्रकारामधून करावयाच्या करकपातीची सक्ती खालील दोन पैकी कोणतीही अट पूर्ण केल्यास लागू होईल.

अ. धंद्याची उलाढाल रुपये एक कोटीपेक्षा अधिक किंवा

ब. वकील, डॉक्टर, सीए इ. व्यवसायामधील जमा राशी रु. ५० लाखाहून जास्त.

करकपातीसाठी प्रस्तुत केलेले उत्पन्नाचे प्रकार : १. व्याज २. कंत्राटदारास देणे ३. कमिशन व दलाली ४. स्थावर मालमत्ता भाडे ५. व्यावसायिक वा तंत्रज्ञान द्यावयाची फी

समभागधारकास कंपनीकडून मिळणारा लाभांश हा कलम १० नुसार करमुक्त होता. परंतु, लाभांशावरील कर रद्द झाल्याने आता समभागधारकास लाभांशाच्या उत्पन्नावर कर भरावा लागेल. नव्या बदलानुसार कंपनीने रु. ५००० पेक्षा अधिक लाभांश संपूर्ण आर्थिक वर्षामध्ये दिल्यास त्यामधून १०% या दराने आयकर कपात करणे आवश्यक होईल.

मात्र तत्वानुसार म्युच्युअल फंड करीत असलेले उत्पन्न वाटप करकपातीच्या आधीन झाले आहे. युनिट धारकास आर्थिक वर्षामध्ये एकंदर रु. ५००० पेक्षा अधिक उत्पन्न वितरीत करीत असल्यास त्यामधून उत्पन्न खाल्यावर जमा करण्यापूर्वी अगर आदा करण्यापूर्वी १०% दराने आकार कपात करावी लागेल. कंत्राटदाराने करावयाच्या कामाचा मोबदला देण्यापूर्वी करकपात करणे आवश्यक आहे. कंपनी किंवा कंत्राट देणाऱ्या व्यक्तीस त्याच्याकडून खरेदी केलेल्या कच्चा

माल प्रक्रिया करून परत विकल्यास करकपात करण्याची तरतुद लागू आहे. परंतु, अन्य व्यक्तीकडून कच्चा माल घेवून तयार माल पुरविल्यास करकपात लागू नाही. करकपातीचे क्षेत्र वाढविण्यासाठी आता कच्चा माल कंत्राट देणारी व्यक्ती अगर या व्यक्तीशी संलग्न व्यक्ती अगर संस्थेकडून कच्चा माल घेतल्यास करकपातीची तरतुद लागू राहिल.

सहकारी संस्थेने आपल्या सभासदांना किंवा सहकारी बँका वगळता अन्य सहकारी संस्थांना किंवा प्राथमिक शेतकी पतपुरवठा वा पतपुरवठा संस्था इ. ना व्याज दिल्यास करकपात करण्याची तरतुद लागू नाही. परंतु ही सवलत प्रस्तावित तरतुदीनुसार सहकारी संस्थेची संपलेल्या आर्थिक वर्षामधील उलाढाल रुपये पन्नास कोटी पेक्षा अधिक आणि द्यावयाचे वर्षामधील व्याजाची रक्कम रुपये ४०,००० पेक्षा अधिक असल्यास लागू रहाणार नाही. अर्थात, वयोवृद्ध व्यक्तींसाठी मर्यादा रु. ४०,००० ऐवजी रु. ५०,००० राहिल.

नव्याने व्यवसायामध्ये आलेल्या 'स्टार्ट अप' कंपन्या चांगल्या मनुष्यबळाला आकर्षित करण्यासाठी आर्थिक स्वरूपामध्ये अधिक वेतन देवू शकत नाही. त्यामुळे समभागाच्या स्वरूपात वेतन दिले जाते. परंतु अशा समभागाच्या रकमेवर आयकर भरण्याची वेळ आल्यास कर्मचाऱ्यांना आर्थिक आमदनी कमी असताना कराच बोजा सहन करावा लागेल. म्हणून, करकपात करण्यासाठी समभाग वाटपानंतर चार वर्षांची मुदत दिली आहे. समभाग आधी विकले किंवा नोकरी आधी सोडली तर त्या दिवशी सवलतीची मुदत संपेल.

व्यावसायिक सल्लागार आणि तांत्रिक सल्लागारांना दिलेल्या फी मधून १०% दराने करकपात लागू आहे. अर्थात वर्षामधील फी ची रक्कम रुपये ३०,००० पेक्षा अधिक असावी, अन्यथा करकपात करण्याची गरज नाही. तांत्रिक सल्ला आणि तंत्रज्ञानाने करावयाचे काम यामध्ये गल्लत होत होती आणि नंतर उल्लेखलेल्या कामास अन्य कलमानुसार २% दराने करकपात लागू आहे. हा विवाद टाळण्यासाठी तांत्रिकसल्ला फी साठी करकपातीचा दर १०% पासून कमी करून २% एवढा प्रस्तावित आहे.

या व्यतिरिक्त परकीय चलनामधील गुंतवणूकीवरील परतावा, स्थावर मालमत्ता, पायाभूत सुविधांसाठीचा न्याय इ. साठी असलेल्या करकपातीच्या सवलतीच्या दरांना मुदतवाढ दिली आहे व काही अटी शिथिल केल्या आहेत.

हा संगणकाचा जमाना आहे. तरुणवर्ग आपल्या गरजांसाठी अमेझॉन, फ्लिपकार्ट, ई-बे, मंत्रा इ. संगणकीय विनीमयाच्या माध्यमाने खरेदी करतात. अन्य ग्राहक देखील कमी किंमत व आकर्षक बक्षीस योजना यामुळे या माध्यमाने खरेदी करतात. आगामी काळामध्ये प्रत्यक्ष दुकानामधून होणाऱ्या व्यवहारांपेक्षा संगणकीय माध्यमामधून अधिक होतील.

करकपातीचे एक उद्दीष्ट उत्पन्नासंबंधी व्यवहारांची माहिती घेणे हे देखील असते. त्यामुळे कर चुकवेगिरीस आळा बसतो. या दृष्टीकोनातून संगणकीय माध्यमाने किंवा ई-कॉमर्सद्वारे होणाऱ्या व्यवहारांसाठी करकपातीचा कायदा लागू केला आहे. संगणकचे आगर ई कॉमर्सचे माध्यम अगर प्लॅटफॉर्म उपलब्ध करून देणाऱ्या व्यावसायिक संस्थेवर करकपातीची जबाबदारी सोपविण्यात आली आहे. त्यामुळे, वस्तू व सेवांची खरेदी करणाऱ्या ग्राहकास करकपात करण्याची जबाबदारी नाही.

करकपातीचा दर १% एवढा आहे. परंतु विक्रेत्यांना कायमखाते क्रमांक (PAN) नाही पुरवील तर करकपातीचा दर ५% राहिल.

वस्तू व सेवांसाठी दिलेल्या संपूर्ण रकमेवर ज्यामध्ये किंमत, वस्तू व सेवाकर, पॅकींग व वाहतूक खर्च इ. सर्व गोष्टींचा समावेश करकपात करणे आवश्यक आहे. ग्राहकाने परस्पर विक्रेत्यास पैसे केले तरी त्या रकमेवर मध्यस्थ माध्यमास करकपात करण्याची जबाबदारी राहिल.

परंतु विक्रेत्याने कायम खातेक्रमांक किंवा आधार क्रमांक दिल्यास व त्याला वर्षामध्ये दिली जाणारी एकंदर रक्कम रुपये पाच लाखपेक्षा कमी असल्यास करकपात लागू नाही.

विक्रेत्याने कर गोळा करण्यासंबंधी दोन महत्वाचे बदल केले आहेत. परकीय पर्यटनाच्या योजनांची विक्री करणाऱ्या व्यक्तीस करापोटी अधिक ५% रक्कम (कायम खाते क्र. न दिल्यास १०%) आणि रु. १० कोटीपेक्षा अधिक विक्री करणाऱ्या ग्राहकाने वर्षामध्ये रु. ५० लाखापेक्षा खरेदी केल्यास आयकरापोटी ०.१०% (कायम खाते क्र. न दिल्यास १%) गोळा करावे लागतील.

आयकर कपात व गोळा करण्यासंबंधी कायद्यामधील बदल १ एप्रिल २०२० पासून लागू होतील.

### धर्मदाय संस्था

सार्वजनिक हिताची कामगिरी बजावणाऱ्या धर्मदाय संस्था आणि मंदीर, चर्च, मशीद इ. धार्मिक संस्थांना आयकराच्या दायित्वामधून सुट दिली आहे. या सवलतीस पात्र ठरण्यासाठी आयकर विभागाकडे नोंदणी करणे आवश्यक आहे. ही नोंदणी आयुष्यात एकदाच करावी लागते. त्यानंतर दरवर्षी केलेल्या कामकाज व खर्चाची आयकर अधिकारी छाननी करतात.

चांगले काम करणाऱ्या सार्वजनिक धर्मदाय व धार्मिक संस्थांना प्रती वर्षी होणाऱ्या कर निर्धारणासाठी मोठ्ठ्या प्रमाणावर सुट देण्याचा सरकारचा मानस आहे. त्यासाठी प्रस्तावानुसार आयकर विभागाकडील नोंदणी ही संपूर्ण आयुष्यासाठी न राहता केवळ ५ वर्षासाठी राहिल आणि दर ५ वर्षांनी नोंदणीचे नुतनीकरण करावे लागेल. त्यामुळे आयकर अधिकारी पंचवार्षिक कामकाजाचा आढावा घेतील आणि संस्थांना देखील आपले कामकाज कायद्याच्या कक्षेमध्ये ठेवत लोकसेवा करण्याची वेळ येईल.

नव्याने सुरु होणारे सार्वजनिक न्यास सुद्धा याच चाकोरीमधून जातील. परंतु त्यांना तीन वर्षासाठी तात्पुरती नोंदणी दिल्यानंतर उद्दीष्ट किंवा नियमामध्ये बदल केल्यास फेर नोंदणी करणे आवश्यक राहिल.

धर्मदाय संस्थेचे कामकाज उद्दीष्टांना धरून नसल्यास किंवा आयकर कायद्याचे पालन न केल्यास त्यांची नोंदणी व करसवलत रद्द करण्याचा अधिकार कमिशनरांना राहिल.

धर्मदाय संस्थांना देणगी देणाऱ्या व्यक्तीस आयकरातून सवलत मिळते. त्यासाठी संबंधीत संस्थेला मान्यता घ्यावी लागते. अशा मान्यतेची मुदत देखील पाच वर्षे राहिल आणि मिळालेल्या देणग्यांचे विवरण पत्रक भरणे सक्तीचे राहिल.

आजमितीस मान्यतापात्र धर्मदाय संस्थांना १ एप्रिल नंतर ९० दिवसांमध्ये नोंदणीसाठी आवेदन देणे गरजेचे आहे. परंतु त्यांची परत फेरतपासणी अगर छाननी न होताच त्यांना नविन तरतुदीनुसार नोंदणी बहाल केली जाईल.

### वैयक्तिक आयकराचे दर

आर्थिक वर्ष २०२०-२१ साठी अर्थमंत्र्यांनी वैयक्तिक करदाते आणि हिंदू अविभक्त कुटुंबासाठी आयकराचे वैयक्तिक दर जारी केले आहेत. अ. पहिला विकल्प : प्रचलीत कायदानुसार उपलब्ध सर्व वजावटी आणि करमुक्त उत्पन्नाचा लाभ घेवून मोजमाप केलेले एकंदर उत्पन्न :

| उत्पन्न (रु.)         | आयकर |
|-----------------------|------|
| ० ते २,५०,०००         | ०    |
| २,५०,००१ ते ५,००,०००  | ५%   |
| ५,००,००१ ते १०,००,००० | २०%  |
| १०,००,००१ पेक्षा अधिक | ३०%  |

ब. पर्यायी विकल्प : प्रचलीत कायदानुसार उपलब्ध बऱ्याचशा वजावटी आणि करमुक्त उत्पन्नाच्या लाभावर पाणी सोडावे लागेल. म्हणजेच करपात्र उत्पन्नाची रक्कम वाढेल.

| उत्पन्न (रु.)          | आयकर |
|------------------------|------|
| ० ते २,५०,०००          | ०    |
| २,५०,००१ ते ५,००,०००   | ५%   |
| ५,००,००१ ते ७,५०,०००   | १०%  |
| ७,५०,००१ ते १०,००,०००  | १५%  |
| १०,००,००१ ते १२,५०,००० | २०%  |
| १२,५०,००१ ते १५,००,००० | २५%  |
| १५,००,००० पेक्षा अधिक  | ३०%  |

वरील सवलतींचे करांचे दर उपलब्ध होण्यासाठी खालील अटी व शर्ती आहेत. :

१. फक्त वैयक्तिक करदाते आणि हिंदू अविभक्त कुटुंबासाठी जर त्यांना धंदा-व्यवसायाचे उत्पन्न नसेल तरच विकल्प उपलब्ध
२. एकदा हा विकल्प स्विकारल्यास तो पुढील वर्षासाठी सक्तीचा राहिल.
३. सवलतीचे आयकराचे दर ज्या आर्थिक वर्षामध्ये एखाद्या शर्तीचा भंग झाल्यास लागू होणार नाही.
४. सवलतीचे दर उपलब्ध होण्यासाठी करपात्र उत्पन्नाचे मोजमाप करताना खालील वजावटी व करपात्र उत्पन्नाचा लाभ घेता येणार नाही.
६. व्यावसायिक उत्पन्न नसणाऱ्या व्यक्तीस नवे किंवा जुने करदर स्विकारण्याचा विकल्प दरवर्षी उपलब्ध राहिल.
७. व्यावसायिक उत्पन्न असणारी व्यक्ती एकदाच नवे करदर स्वीकारू शकते. नंतर बदल करता येणार नाही. अपवाद एक वेळेचा. नंतर माघार नाही.
- अ. करमुक्त सुट्टीच्या प्रवासाचा भत्ता, घरभाडे भत्ता, करमुक्त भत्ते, निर्वाचित प्रतिनिधींना मिळणारे भत्ते, अज्ञान मुलांसाठीचा करमुक्त भत्ता असे कलम १० नुसारचे करमुक्त उत्पन्न खास आर्थिक क्षेत्राची कलम १० ए ए नुसार मिळणारी सवलत, पगारदार व्यक्तींना मिळणारी प्रमाणीत वजावट, प्रोफेशन कर, स्वतःच्या गृहकर्जावरील व्याजाची वजावट, अतिरिक्त घसारा, नव्या मालमत्तेचा भत्ता, चहासाठी वजावट, संशोधनासंबंधी वजावट, वारसांना मिळणारी निवृत्तीवेतनावरील वजावट व दोन वगळता उर्वरित सहाव्या अध्यायानुसार मिळणाऱ्या सर्व वजावटी उदा. कलम ८० सी गुंतवणूकीची वजावट, आरोग्य विमा, बँक व्याज,

देणगीची वजावट इ. यापैकी कोणतीही वजावट मिळणार नाही.

- ब. गेल्या कालावधीमधील वजावट न मिळालेला अतिरिक्त घसान्याची व तोट्याची रक्कम उपलब्ध राहणार नाही.
- क. सर्वसाधारण घसान्याची वजावट यासाठी जारी नियमानुसार घ्यावी लागेल.
- ड. अन्य कायदानुसार कोणती वजावट दिल्यास ती देखील उपलब्ध राहणार नाही.
४. आधीच्या कालावधीचा वजावट न प्राप्त झालेला तोटा रद्द समजला जाईल.
५. सवलतीचे आयकराचे दर त्यासाठी घालून दिलेल्या पद्धतीनुसार घ्यायचे कळवावे लागेल आणि आयकराचे विवरणपत्रक उपलब्ध कालावधीमध्येच सादर करावे लागतील.

एकंदर पाहता सवलतीचे आयकराचे दर स्विकारण्यासाठी असलेल्या अटी व शर्ती अत्यंत किचकट आहेत. तसेच अनेक वजावटी व करमुक्त उत्पन्नाचा लाभ घेता येत नसल्याने करपात्र उत्पन्नाची रक्कम वाढेल. त्यामुळे करांचे दर कमी असले तरी देय कराची रक्कम अधिक असेल.

दोन्ही करांवर आयकराचा अधिभार व उपकर लागू राहिल. हे खालीलप्रमाणे आहेत.

आधीभार :

| उत्पन्न(रु)        | आधीभार | उत्पन्न(रु)              | आधीभार |
|--------------------|--------|--------------------------|--------|
| ५ लाखापर्यंत       | ०      | उत्पन्न १ कोटी ते २ कोटी | १५%    |
| ५० लाख ते १ कोटी   | १०%    | २ कोटी ते ५ कोटी         | २५%    |
| ५ कोटी पेक्षा अधिक | ३७%    |                          |        |

आधिभार हा करदात्याच्या करपात्र उत्पन्नावरील देयकराच्या रकमेवर आकारला जातो.

आयकर व आधिभाराच्या रकमेवर ४% दराने आरोग्य व शिक्षणासाठी उपकर आकारला जाईल. एकंदर पाहता सवलतीच्या करांचे दर स्वीकारून आयकराची रक्कम फार कमी होईल असे नाही. काही परिस्थितीमध्ये करांच्या रकमेमध्ये वाढच होईल आणि कोणत्याही परिस्थितीमध्ये डोकेदुखी नक्की वाढेल. करबचत करण्यासाठी होणाऱ्या गुंतवणूकीवर देखील विपरीत परिणाम होईल.

### खमंग मिसळ

सर्वांनाच खमंग मिसळ आवडते. मिसळीची किंमत रु. १०० आहे. परंतु जनतेला स्वस्त मिसळ मिळावी म्हणून किंमत रु. ८० केली परंतु त्या सोबत पाव मिळणार नाही अशी अट ठेवली. जर पाव हवा असेल तर रु. ३० द्यावे लागतील असे ठरविले. यासाठी कारण असे दिले की पाव खाण्याची सक्ती करण्याची गरज नाही जर हवा असेल तर पैसे देवून तो उपलब्ध राहिल.

### चाकरमानी

पगारदार व्यक्तींना योग्य स्वरूपात आणि सोई सवलतीच्या रूपाने मिळणाऱ्या पगारावर आयकर भरावा लागतो. सोई सवलतीच्या व्याख्येमधून काही सोई वगळल्या आहेत. त्यावर कर भरावा लागत नाही. मान्यताप्राप्त सुपर अॅन्युएशन निधीमध्ये मालकाने जमा केलेली रु. १.५० लाखापर्यंतची रक्कम करमुक्त आहे. परंतु प्रॉव्हिडंट फंड

आणि राष्ट्रीय पेन्शन योजनेसाठी अशी मर्यादा नाही.

त्यामुळे नव्या प्रस्तावानुसार प्रॉव्हिडंट फंड, राष्ट्रीय पेन्शन योजना आणि सुपर अॅन्युएशन फंडामध्ये मालकाने जमा केलेल्या निधीपैकी रु. ७.५० लाखापर्यंत एकत्रीतपणे रक्कम करमुक्त राहिल. उर्वरित रक्कम व त्यावर मिळणारे वार्षिक व्याज करपात्र राहिल.

### समभाग

नव्या उद्योजकांना कुशल कामगार मिळणे कठीण असते. त्यामुळे ते रोखीएवजी समभागाच्या स्वरूपामध्ये पगार देतात. अशी समभागाच्या मुल्यांची रक्कम करपात्र उत्पन्न ठरते व कर्मचाऱ्यांवर पैसे न मिळता आयकर भरण्याची पाळी येते. यावर उपाय म्हणून मिळालेल्या समभागांच्या मुल्यावर ४ वर्षांनंतर आयकर भरण्याची सवलत दिली आहे. अर्थात त्यापूर्वी समभाग विकल्यास अगर नोकरी सोडल्यास ही सवलत त्या दिवसापर्यंतच लागू राहिल.

### सर्वांसाठी घर

मोदी सरकारचे ‘सर्वांसाठी घर’ हे ध्येय आहे. या दृष्टीने एक पाऊल उचलण्यात आले आहेत. पन्नास लाख रुपये पर्यंत किंमतीची किफायतशीर घरे उपलब्ध व्हावीत आणि ती गरजूंनी खरेदी करावी यासाठी आयकराच्या माध्यमातून प्रोत्साहन दिले आहे.

किफायतशीर म्हणजे रु. ४५ लाखापर्यंत किंमतीचे घरबांधणीची योजना कार्यान्वीत करणाऱ्या उद्योजकाला उत्पन्नाच्या १००% रकमेची वजावट मिळते. यासाठी प्रकल्प चेन्नई, दिल्ली, कोलकत्ता व मुंबईमध्ये किमान १००० चौ. मीटर आणि अन्य ठिकाणी किमान २००० चौ. मीटर जमिनीच्यावर वरील चार ठिकाणी घरांचा आकार ३० चौ. मीटर व अन्यथा ६० चौ. मीटर इ. काही अटी लागू आहेत. यामध्ये एक अट ही प्रकल्प मंजुरीची आहे व मंजुरीसाठी अंतिम दिनांक ३१ मार्च २०२० पर्यंत मंजूर होणे गरजेचे आहे. नंतरच्या काळांमध्ये या चार मेट्रो व्यतिरिक्त त्या गटात नोइडा, गाझियाबाद, हैदराबाद, बंगलोर इ.चा समावेश झाला आहे.

किफायतशीर घर खरेदीस मदत म्हणून खरेदीदारास गृहकर्जावरील व्याजासाठी रु. १.५० लाखाच्या कमाल मर्यादेमध्ये अतिरिक्त वजावट उपलब्ध आहे. अन्य अटीखेरीज, कर्जासाठी मंजुरी ३१ मार्च २०२० पर्यंत प्राप्त होणे आवश्यक आहे.

या दोन्ही सवलतींची अट शिथिल करत, प्रकल्प मंजुरी व कर्ज मंजुरीची मुदत एका वर्षाने वाढवून ३१ मार्च २०२१ पर्यंत वाढविण्याचा प्रस्ताव आहे. याचा घरबांधणी उद्योग व घराच्या खरेदीदारांवर सकारात्मक परिणाम होईल.

### स्थावरामधील काळा पैसा

स्थावर मालमतेच्या व्यवहारामध्ये प्रचंड किंमतीमुळे काळ्या पैशाच्या प्रार्दूभावाचा पुरावा अनेक व्यवहारांमध्ये आला आहे. यावर अनेक उपाय योजना केल्या गेल्या. परंतु त्यांना अपेक्षित यश आले नाही.

नवीन उपाययोजनेतील तरतुदीनुसार स्टॅप ड्युटी भरण्याकरता विभागवार ठरविलेल्या किमान किंमती आधारभूत धरल्या जातात. आयकरामधील तरतुदीनुसार स्थावर मालमत्ता -जमीन, घर इ.

खरेदीची किंमत ही राज्य सरकारने ठरविलेल्या विभागवार किंमतीपेक्षा कमी असल्यास दोघांचे करपात्र उत्पन्न या किंमतीनुसार केले जाईल.

उदाहरणार्थ, मालमत्ता विक्रीची किंमत रु. ३८ लाख व विभागवार ठरविलेली किंमत रु. ४० लाख असल्यास फरकाचे रु. २ लाख हे मालमत्ता खरेदीदार व विक्रेता या दोघांच्या करपात्र उत्पन्नामध्ये वाढविले जातील व त्यावर कर भरावा लागेल.

मुल्य मोजणीमधील मानवी त्रुटींसाठी वरील नियमानुसार ५% चा फरक विचारात घेवू नये अशी अट टाकली गेली. या अटीमध्ये अधिक शिथिलता आणत प्रस्तावीत तरतुदीनुसार खरेदी-विक्री किंमतीच्या १०% पेक्षा स्टॅपड्यूटीसाठीचे मुल्य अधिक नसल्यास फरकाची रक्कम उत्पन्नामध्ये जमा करण्याची जरूर नाही.

या तरतुदीने स्थावर बाजारामधील मंदाची दखल घेतल्याचे निदर्शित होते. अर्थात, प्रत्यक्ष किंमत खूपच कमी असल्यास मुल्यमापन करण्याचा वेगळा पर्याय उपलब्ध आहे.

१ एप्रिल २००१ पूर्वी मालमत्ता खरीदली असल्यास करदात्यास खरेदीची किंमत अगर १ एप्रिल २००१ ला तिचे बाजारमुल्य यापैकी अधिक रक्कम स्विकारता येते.

प्रस्तावित तरतुदीनुसार जमीन वा इमारत अशा स्थावर मालमत्तेचे बाजारमुल्य त्या मालमत्तेचे १ एप्रिल २००१ च्या स्टॅपड्यूटी भरण्यासाठी बाजारमुल्य ठरविले असल्यास या रकमेपेक्षा अधिक असणारे बाजारमुल्य लक्षात घेता येणार नाही. या तरतुदीचा मोठ्या शहरांमधील मालमत्तांच्या विक्री करताना विपरीत परिणाम होईल कारण स्टॅपड्यूटी मूल्यापेक्षा बाजारभाव अधिक असतो.

## निवासी भारतीय दर्जा

करदात्या व्यक्तींचे भारतामध्ये निवासी आणि अनिवासी असे दोन गट केले जातात. निवासी व्यक्तीस भारतामध्ये कमविलेल्या उत्पन्नावर आयकर भरावा लागतो. परंतु अनिवासी व्यक्तीस केवळ भारतामध्ये कमविलेल्या उत्पन्नावर आयकर भरावा लागतो. तर भारताबाहेर कमविलेल्या उत्पन्नावर भारतामध्ये आयकर भरावा लागतो. परंतु अनिवासी व्यक्तीस केवळ भारतामध्ये कमविलेल्या उत्पन्नावर भारतामध्ये आयकर भरावा लागतो. निवासी व्यक्तीस भारताबाहेर असलेली मालमत्ता जाहीर करण्याची सक्ती विवरण पत्रकाद्वारे आहे. तशी सक्ती अनिवासी व्यक्तीस लागू नाही.

अधिक करदात्यांना 'निवासी' दर्जा देण्यासाठी आयकर नियमावलीमध्ये काही बदल प्रस्तावीत आहेत. 'निवासी' भारतीय ठरण्यासाठी असलेली एक अट म्हणजे आर्थिक वर्षापूर्वीच्या चार वर्षांमध्ये ३६५ किंवा अधिक दिवस व्यक्ती भारतामध्ये प्रत्यक्ष उपस्थित असावी आणि संबंधीत आर्थिक वर्षांमध्ये ६० किंवा अधिक दिवस भारतामध्ये उपस्थित असावी. भारतीय नागरीक किंवा भारतामध्ये उगमस्थान असलेल्या व्यक्तींसाठी दुसऱ्या अटीमधील ६० दिवसांची अट १८३ दिवसांपर्यंत शिथिल केली आहे. प्रस्तावानुसार या १८३ दिवसांचा कालावधी कमी करून १२० दिवस एवढाच ठेवण्यात येईल.

भारतामधील 'सामान्य निवासी' दर्जा प्राप्त न होण्यासाठी नैसर्गिक व्यक्ती किंवा हिंदू अविभक्त कुटुंब पूर्वीच्या १० पैकी ७ वर्ष अनिवासी असल्यास त्या व्यक्तीस 'सामान्य निवासी' असल्याचा दर्जा प्राप्त होईल.

तसेच भारतीय नागरीक हा भारताबाहेरील कोणत्याही देशामध्ये आयकर देण्यास बांधील नसल्यास अशा भारतीय नागरिकास आयकर कायद्याच्या दृष्टीने 'निवासी भारतीय' समजले जाईल. त्यामुळे त्याने जगभर कमविलेल्या सर्व देशांमधील व भारतामधील उत्पन्न हे भारतामध्ये करपात्र ठरेल. या प्रस्तावामुळे अनेक आजचे आयकरासाठी 'अनिवासी' असलेले करदाते 'निवासी' होतील!

अर्थात अनिवासी भारतीय नागरिकांना 'निवासी' करून जागतीक बाजारपेठेमधील स्वदेशी नागरिकांच्या पोटात गोळा उभा राहिला कारण, आखाती देशांमध्ये आयकर नाही. जहाजांवर काम करणाऱ्या व्यक्ती बऱ्याच वेळेस कोणत्याही देशाचे नागरिक नसतात. त्यामुळे जगभरात किंवा आखाती देशात वा जहाजावर कमविलेले करमुक्त उत्पन्न भारतामध्ये करपात्र ठरते!

अर्थात, या वर्गाला कराच्या जाळ्यामध्ये आणण्याचा हेतू नसल्याचे अर्थमंत्र्यांनी जाहीर करत कायदा करताना प्रस्तावामध्ये योग्य तो खुलासा करण्याचे प्रतिपादन करून या वर्गाची घालमेल कमी केली आहे.

## प्रशासकीय बदल

सध्या आयकराच्या प्रशासकीय तरतुदींमध्ये पारदर्शकता व सुलभपणा आणण्यासाठी सरकार प्रयत्नशील आहे. संगणकाच्या माध्यमाने करनिर्धारण करण्याची योजना कार्यान्वित होत आहे. त्यामुळे करदाते आणि अधिकारी यांची प्रत्यक्ष भेट होत नाही. दोघांचे वेळ व श्रम यांचा अपव्यय टळतो. या संगणकीय करनिर्धारणाच्या कक्षमध्ये वाढ सूचविली असून, करदात्यांनी आयकर विवरण पत्रक भरले नाही, अधिकाऱ्यांच्या प्रश्नावलीस समर्पक उत्तरे दिली नाहीत. तर एकतर्फी कर निर्धारण देखील संगणकीय माध्यमाने केले जाईल.

आयकर कायद्यामधील तरतुदीने उल्लंघन झाल्यास लावण्यात येणाऱ्या दंड शास्तीचे निर्धारण देखील संगणकाच्या माध्यमाने करण्याची तरतुद केली आहे.

करनिर्धारणाविरुद्ध दाद मागण्यासाठी आयकराच्या अपिलासंबंधी कमिशनरकडे कैफियत मांडता येते. आता प्रत्यक्ष अधिकाऱ्यापुढे उपस्थित न राहता असे विवाद संगणकीय आदान-प्रदानातून निकाली काढता येतील.

भरलेल्या आयकराची माहिती करदात्यास खात्यावर आयकराच्या संगणक प्रणालीमध्ये उपलब्ध करून दिली जाते. याच धर्तीवर स्थावर, समभाग इ. व्यवहार व्याज, लाभांश, घरभाडे इ. उत्पन्न दिलेली करसवलतपात्र देणगी यांची माहिती देखील करदात्यास त्याच्या खात्यावर उपलब्ध करून दिली जाईल. यासाठी संबंधीत विक्रेता, कंपनी, शेअरबाजार, बँका, सार्वजनिक न्यास इ. व्यक्तींनी माहिती आयकर खात्यास पुरवण्यासंबंधी अधिकार आयकर खात्यास बहाल केले आहेत.

या सर्व माहितीच्या आधारे, आयकर विभागामार्फत करदात्यास त्याचे विवरण पत्रक नाव, पत्ता, आयकर क्रमांक इ. माहितीसोबतच उत्पन्न, वजावटी, करभरणा इ. माहिती देखील अपोआप भरून मिळेल. यामुळे करदात्याचा वेळ व श्रम यांची बचत होईल आणि करचुकविण्याच्या प्रवृत्तीस मज्जाव होईल.

सरकारी कार्यालयांमध्ये काम करून घेण्याचे प्रसंगी सामान्य



## आम बजट 2020-21

जनतेला येणारा अनुभव फारसा सुसह्य नसतो. करविषयक कार्यालयांमध्ये मनस्ताप अधिकच जाणवतो.

अर्थमंत्र्यांनी प्रतिपादन केले आहे की कोणतीही कर व्यवस्था ही कर संकलन यंत्रणा आणि करदाते यांच्या विश्वासावर चालत असते. करदात्यांची अधिकारकक्षा स्पष्ट असली तर करव्यवस्थेची घडी व्यवस्थित बसू शकते. या उद्देशाने अर्थमंत्र्यांनी आयकर विभागास 'करदात्यांची संहिता' तयार करण्यास सांगितले आहे.

अर्थात गरज आहे ती अनुशासनाची व संहिता पालनाची!

### माणूस व्हा!

एक हमाल एका व्यापाऱ्याकडे ओझे घेवून येतो व दुकानाच्या सावलीमध्ये थोडा विसावतो. तहानेने व्याकुळलेला हमाल व्यापाऱ्यास पाणि देण्याची विनंती करतो. व्यापारी उत्तर देतो 'आत्ता पाणी द्यायला कोणी माणूस नाही' तहानलेला हमाल म्हणतो 'दादा! तुम्हीच होता का माणूस !!

सरकारी अधिकारी माणूस झाल्यास 'संहिते'ची गरज उरणार नाही. विवादसे विश्वास योजना

आयकर कायदा आणि न्यायालयीन वादविवाद हे जणू समिकरणच झाले आहे. कर निर्धारण करताना अधिकारी जुजबी ते मोठे फेरफार करून कराची मागणी करणे हे आपले आद्य कर्तव्य आहे असेच मानून व्यवहार करतात. काही करदाते कर भरणे पाप समजून आपल्या व्यवहारांची आखणी करतात. या सर्व बाबींचा परिणाम म्हणून आज विविध न्यायालयीन स्तरांवर ४,८३,००० खटले प्रलंबित आहेत. सुमारे ८ ते ९ लाख कोटी रुपये यामध्ये अडकले आहेत. त्यामुळे दोन्ही बाजूंसाठी ही एक मोठी समस्या आहे.

आयकराच्या या समस्येवर अप्रत्यक्ष करांसाठी केलेल्या योजनेच्या यशस्वी अंमलबजावणीने उत्साहीत अर्थमंत्र्यांनी 'विवाद से विश्वास' ही योजना जाहीर केली आहे.

योजनेनुसार विवादामधील प्रकरणातील आयकराची संपूर्ण रक्कम ३१ मार्च २०२० पर्यंत सरकारकडे जमा करून खात्यामधून सोडवणूक

करून घेता येईल. असे केल्यास करावरील व्याज व दंड भरावा लागणार नाही. १ एप्रिल २०२० पासून विवादातून माघार घेतल्यास आयकर व थोडी अधिक रक्कम भरावी लागेल व योजनेचा लाभ घेता येईल. योजनेसाठी ३० जून २०२० ही अंतीम मुदत राहिल.

योजनेमध्ये सहभागी होणाऱ्या व्यक्तीस 'तुरुवासा'पासून अभय मिळेल का हे अद्याप स्पष्ट नाही. परंतु, मिळेल अशा अंदाज आहे. तसेच विवाद दंडासंबंधी असल्यास काय सवलत आहे हे स्पष्ट नाही.

आयकराचे विवाद लहान व मध्यम व्यावसायिक व करदात्यांना परवडत नाहीत. पेनी स्टॉक, हवाला खरेदी अशी अनेक प्रकरणे करदात्यांच्या अंगलट आली आहेत. त्यामुळे करदाते या योजनेचा लाभ घेतील अशी आशा आहे.

योजनेचा तपशील, येत्या कालावधीमध्ये जाहीर होईल. कर्जाची थकबाकी असणाऱ्यांना कर्जमाफी झाल्यास प्रामाणिकपणे परतफेड करणाऱ्या करदात्यांवर त्याचा विपरीत परिणाम होतो. ही योजना असाच अनुभव प्रामाणिक करदात्यांना देईल का ?

### सारांश :

वरीलप्रमाणे तरतुदी सन २०२०-२१ साठी लोकसभेमध्ये मांडलेल्या अर्थसंकल्पामध्ये केलेल्या आहेत. अर्थसंकल्प मंजूर होईल, त्यावेळी काही बदल देखील होवू शकतात. मंजूरीनंतर या तरतुदी १ एप्रिल २०२० पासून लागू होतील.

एकंदर पाहता करदात्यांच्या खिशामध्ये अतिरिक्त भर पडण्याची शक्यता कमी आहे. परंतु व्यवस्थापकीय बदलांमुळे वेळ व श्रम यांचा अपव्यय टळू शकेल!

सीए चंद्रशेखर चितळे

४, गुरुकृपा, साठे कॉलनी,

१३१७, शुक्रवार पेठ, पुणे ४११००२

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## DECLARATION

Mr. Prashant Girbane, declare that I am the Printer & Publisher of the newspaper entitled the 'Sampada', being printed at Modern Printing Service, 1358A Shukrawar Peth, Pune 411 002 and that the particulars in respect of the said newspaper given hereunder are true to the best of my knowledge and belief.

|    |  |  |
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| 1. | Title of the Newspapers  | 'SAMPADA'  |
| 2. | Language in which it is (to be) published  | MARATHI and ENGLISH  |
| 3. | Periodicity of its publication   | MONTHLY<br>10 <sup>th</sup> OF EVERY MONTH   |
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| 11 | Please state RNI Reg.No.<br>Declaration No. and Date   | RNI No. 14454/57<br>SDM/PUNE/SR/77/2018<br>Pune -1, Date 16/10/2018  |

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# Improving the return on health benefits to boost employee morale and productivity.

Mayank Kale



## Health Benefits Today

Many CEOs have experienced it first-hand: imagine that it's one month before your Group Medclaim policy renews and your insurance broker calls you for the first time in 6 months. While you await a new offer from the broker, you ask your HR to look for some more quotes. With quotes in-hand, you realize that your premiums have gone up, so you ask HR to look at the data.

HR sees that Medclaim was only utilized by 8% of your workforce. Sick days have even gone up in the past year. You wonder where your dollars invested in health went.

You're not alone. Conversations with 50+ Pune-area CEOs show that current health benefits like Group Medclaim and health check-ups have poor utilization and low ROI. Despite being an investment that should boost employee morale and health, it's not forgotten by employees as it doesn't meaningfully impact their daily health concerns.

## Health benefits are ripe for innovation

As noted by Mr. Sudhir Tilloo,

director of KPIT Global Solutions and former CEO of Morris Electronics, "if we as founders care about employee productivity, then we must care about employee health. Unfortunately, the tools at our disposal to invest in employee health have remained largely stagnant."

Typical health benefits offerings today include:

- Group Medclaim: insurance cover for emergencies or planned hospitalizations (IPD)
- Self-insured IPD coverage: Employers on their own reimburse IPD costs for their employees. Works quite well for small businesses but creates significant management overhead.
- On-site health checks ups for general health. This is typically a 1-2 event where a team of lab technicians and a doctor would come on-site and conduct physical examinations and blood tests. For, certain industries, it is mandatory to conduct a health-check up and requires a signature of approval from a. Certifying Surgeon and Factory Inspector.

- Self-covering employee OPD fees. This is when employers reimburse an employees fees for typical doctor visits to a general practitioner or specialist.
- CEO of Datar Engineering, Makhrand Datar commented that since "I have a busy workforce that wouldn't take themselves to the doctor when they are sick. To encourage them to get better soon, I would self-fund their doctor visits.

A common issue faced by management and HR is the number of vendors required to deal with health benefits. As noted by Kishor Desai, CEO of Kishor Pumps, "We were dealing with different vendors for GMC, fire, health check-ups, and more. It became a lot for HR to manage."

## Health benefits relate to bottom-line

1. Helps you stay competitive in attracting a skilled workforce: new applicants to companies rate health benefits as one of the factors they consider when taking a new job. As more and more companies offer Group Medclaim or more innovative health benefits, the labor market increasingly

will look for this as a point of differentiation in new employment offers.

2. Can reduce productivity loss due to poor employee health: the average workers takes 18 sick days per year and is 40% less engaged in the workplace when suffering from an acute or chronic condition.

3. Boosts employee morale and satisfaction: it's obvious to believe that healthy workforce is a happier and more cooperative workforce. It's a basic human need to be healthy, like food, water, and shelter – and of course boosts employee morale and satisfaction

Because of these benefits, we're seeing more and more employers build a concrete health benefits strategy for their small, medium, and large businesses.

It's evidenced in the rise in Group Medclaim policies and other health and wellness activities. The 'India Health and Well-Being Study 2018' by Willis Towers Watson found that in 2018, more than 80 per cent of the organizations have taken at least one action in health risks or condition management, weight management, physical activity and nutrition and managing employee stress and mental health.

### **However, health benefits today are underutilized and low satisfaction.**

The most common health benefit provided today by employers is Group Medclaim policies to cover hospitalizations. Despite such a big investment in Group Medclaim, CEOs and HRs receive lackluster returns on their employees utilization and health outcomes:

- CEOs report low satisfaction on Group Medclaim policies impact in their workplace
- Utilization of Group Medclaim is low; between 8-12%
- Brokers and insurers who sell these policies are incentivized to upsell, not fit policies to match an employer's needs
- Because Group Medclaim itself only covers hospitalizations, it does not support employees to interact primary care, preventative care,

diet, and exercise.

- HRs report issues in procuring health benefits: getting quotes is tedious, managing multiple vendors is complicated, and there is occasionally low trust in the incentives of on-site health check-up providers.

### **Promising solutions and strategies to tackle these issues :**

Despite the issues in availing and realizing returns on health benefits, there are several emerging strategies being used by companies across the world:

1. Intentionally measure ROI of health benefits every year: without measuring employee satisfaction and utilization, you are basically shooting in the dark. As with any other organizational investment, it's critical to measure its return. Through a company wide-polling and individual conversations with those who have made large insurance claims, management and HR can get a better idea of what is driving cost and low engagement – to inform where investments can be made or adjusted.

2. Opt to self-insure all or part of your coverage. For smaller companies, self-insuring is a natural option – but at a certain size and scale, managing employee claims and disbursements becomes a challenge.

A better option for medium to large organizations is to look at self-insuring a specific subset of benefits, e.g. maternity benefits. This can lead to significant cost-savings.

Of course, this would go in the way of advice from traditional insurance brokers and agents who are incentivized to sell you more insurance – not necessarily create custom plans that give you the most bang for your buck.

3. Make it easier for your employees to access a doctor. It's well understood globally that primary healthcare, or visiting a general practitioner (GP), has the most significant impact in keeping patients healthy. Visiting your GP plays the biggest role in providing convenient,

first-line treatments, managing chronic conditions like hypertension and diabetes, and getting early detection and screening of more complex diseases like cancer.

### **How to make primary care more accessible to employees?**

1. Purchasing OPD coverage as an add-on to Group Medclaim. This would provide a fixed amount of cover to pay for employees visits to in-network doctors – so they can visit for free. While OPD cover does make it more financially accessible for employees to visit a doctor, the doctors covered under OPD insurance are not monitored for quality, and occasionally there are issues with billing at point-of-care.

2. Membership-based primary care practices. This is a new model of primary care inspired by western healthcare systems. For a fixed fee, employees can visit a doctor unlimited times through the year at specific clinics. Like OPD insurance cover, membership-based practices make it affordable for patients to visit a doctor, but also use technology to provide convenient, continuous access to medical advice. For example, Loop Health is a membership-based primary care practice in Pune that offers unlimited visits to its 8 clinics across the city, provides 24x7 access to a Doctor-on-Call, and does chronic condition management for members with hypertension or diabetes. Access to family physicians is key to preventing further complications and screening for disease – and can meaningfully reduce hospitalizations and insurance claims.

4. Work with a single vendor to manage Medclaim, compliance, and other benefits: certain companies now offer advisory services to make it easy to purchase Medclaim, customize plans, purchase health check-ups, and more. For example, Willis Towers Watson has a health benefits advisory group that works with larger firms and MNCs to structure and procure their health benefits. For smaller firms under 800 employees, Loop Health does the same.

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# The Data Story of NCL

*In conversation with the MCCIA team, Prof Nangia, Director of NCL shares the crucial role data plays at this world renowned chemical laboratory*



## Q1 Can you give us a brief about your organisation?

National Chemical Laboratory (CSIR-NCL), Pune, established in 1950, is a constituent laboratory of Council of Scientific and Industrial Research (CSIR). NCL is working in all areas which have chemistry as the focal point like organic chemistry, inorganic chemistry, material sciences, polymer sciences, catalysis, bio-chemical sciences, computational chemistry etc. It is a science and knowledge-based research, development and consulting organization. It is internationally known for its excellence in scientific research in chemistry and chemical engineering as well as for its outstanding track record of industrial research involving partnerships with industry from concept to commercialization.

## Q2 How is data generated and used at NCL?

At NCL, data is mostly generated from experiments in the chemical laboratories. We generate a large volume of data. Our labs are now going digital and all the instruments are linked to a digital platform. There is more digital control than human control. This applies to all our major instruments from reactor assemblies to pilot plants where the

chemical reactions are carried out. After the generation of data, there are 2 key steps. First is the assimilation of data and data mining and the second is the data analysis. If these two steps are carried out properly, it helps in achieving greater accuracy of projections and predictions and the goals of the research project are reached faster than they would have been otherwise. This data is stored and mined at a later stage to build effective simulation models that help in reducing the number of physical experiments needed, thus saving resources. This also helps us get an idea of the kind of experiments and models that a scientist should not try. So, data forms an integral part of each experiment and this is the optimal way of running any research enterprise. As they say, data is the new oil. At NCL, we believe in this fully. Most of the data management is through a data pipeline rather than a physical activity.

## Q6 What is the scale of data that NCL generates?

The scale of data varies from experiment to experiment. Most experiments in the chemical laboratories generate data of the order of 1MB up to a few MB. Every physical experiment generates a finite amount of data. But in computa-

tional experiments or virtual experiments that are conducted through simulation studies, several GB of data is generated. This is where the AI and ML platforms are helpful for assimilating the data from all these experiments. Especially when we are doing an experiment where we are collecting data from several sources, these AI and ML platforms help to put all that data together in a structured format which makes it understandable to the researcher. It also helps to establish a number of correlations and trends in the data that the physical eye may tend to overlook. So, each experiment or instrument has its own digital platform for the collection and storage of the data and it is usually in a format that is easy to access, read and share. All the data that is generated has a backup which is either physical or digital.

## Q4 How is external data used in your analysis?

In the past, we only had the ability to analyse our own internal data which was limited. But now a lot of data is available in the public domain. The virtual platform enables us to access and analyse this data of numerous other experiments done at other research labs around the world. This helps us to

learn from other experiments, refine and modify our models, evaluate our results in relation to what others are doing and also plan our experiments in a way that either complement or supplement experiments that other researchers are doing to avoid duplication. The ability to access external data, store it virtually and organise it in a way that leads to information has led to more innovation and more reliable conclusions. All this is possible because the connection between the virtual and the real world is almost seamless now.

**Q5 What kind of data analysis is usually done in a typical experiment?**

There are 2 types of analysis which we do that relate to data and computations. Firstly, we use the data analysis to understand trends in the experimental data. The second level of analysis is done to understand a deeper detail of the data that is not visible to the human eye. This was not possible earlier, but because of the AI and ML platforms available today, this has become possible and the depth to which we can understand the underlying correlations in the data has increased. After an experiment is completed, we also try to understand a higher level of detail of the experiment through simulations. This can be done by developing a model based on the experimental data and then making projections for a new experiment which is more in depth. Another popular statistical tool that we use is called 'Design of Experiments'. In DOE, we design the layout of a physical experiment and the design is based on a mathematical model. It is used to test the outcomes of an experiment under varying physical conditions. These outcomes (either real data or simulated data) are compared to draw conclusions about the research questions under study.

**Q6 What are some of the problems that you face in the data pipeline, right from data collection to analysis?**

There are 3 main problems we face  
 1. Data collection is an issue at times. This is because even though the data is digitised, the collection process is still manual in some cases. This leads to the data being inaccurately recorded at times. So, we are trying to automate the

entire data collection, data documentation and archiving process in order to minimise human intervention. This will result to more transparency and reliability in the data pipeline.

2. Another issue we face is that the raw data needs to be processed and standardised after collection in order to be stored in a structured format for further analysis and comparisons. Converting raw data into clean data requires us to make some assumptions, which need to be justified. For example, if there is some noise in the data, that should be cleaned but if there is a genuine spike or peak in the data, it should not be suppressed. This step also requires a certain degree of human intervention and is often a challenge for the researcher. We are trying to automate this step as well so that the data cleaning process can be easier and more precise.

3. The third challenge we face is that students tend to make correlations when they are not necessary. As we all know, correlation does not always imply causation. So, even if the graphical representation of an experiment might indicate a relationship between two variables, it does not imply that one variable causes a change in the other variable. We feel that this is not completely taught in most of the syllabuses. Data handling and analysis should be emphasised upon in all curriculums.

**Q7 How has the data revolution impacted the field of chemical sciences in particular?**

This revolution has impacted in a very positive way. For example, most collaborative projects are complementary in nature and the data revolution has allowed for a better means of exchange of data and information amongst the collaborators. Processes have become faster, better, more efficient. Our ability to deliver results in a restricted timeframe has also improved. The data revolution has also allowed us to simulate many experiments which were not possible earlier. Recently, one of the scientists at NCL simulated the early events of the evolution of life and published a paper on it which has got a lot of fame. He was able to

computationally simulate the early chemical reactions that led to the evolution/creation of the universe. While the chemical reactions of such events are relatively simple, evolutionary possibilities are almost infinite. Such an experiment will generate a very large volume of data. Some projects rely very heavily on computational experiments whereas some projects are almost completely experimental. At the moment, the ratio of physical experiments is to computational experiments is about 90 : 10. Computational experiments are preferred when the physical experiments are almost entirely infeasible.

**Q8 Are there any big collaborative projects you have going on with other industries and academic institutions? Are you open to any further collaborations?**

We have several collaborations going on currently. We have active collaborations with the other CSIR labs. We also have collaborations with IITs, IISERs, IISCs etc. Within Pune, we have collaborations with IISER, PCCM and many other institutions. In terms of social outreach, we have a drinking water purification unit which is based on the polymer hollow fibre membrane technology which has been developed by NCL and this is being installed at several organisations and academic institutions. We are supporting and helping them to set it up. We are open to collaborate with any entity provided we feel that we can contribute in a meaningful way and our contribution should be unique and recognised.

**Q9 How will NCL impact society in the future?**

The future of this organisation is extremely bright and NCL will be playing a major role in the field of chemical sciences. The reason is that the resources on this planet are limited and these limited resources are catering to an ever-growing population. So, if we want to meet the requirements of the population in terms of standard and quality of life, we need to make better utilization of the planet than we are used to doing. Chemical sciences will continue to play a big role in these efforts.

# The Data Story of NCCS

The MCCIA team in conversation with with Dr Manoj Kumar Bhat, Director, NCCS



## 1. Could you brief about your institution

The National Centre for Cell Science (NCCS) is an autonomous institute of the Department of Biotechnology, Ministry of Science and Technology, Government of India. NCCS was set up with a mandate of three main functions: (i) Serving as a National Cell Repository, (ii) Basic research in cell biology & (iii) Human resource development.

### **Fulfilling the Mandate**

#### **(a) National Cell Repository**

Animal cell lines are different types of cells obtained from animals, including humans, which are grown and maintained under laboratory conditions. They are essential to study the biology of cells, and are thus crucial for cell biology and biomedical research, and the biotechnology industry. They are one of the major tools used in cellular and molecular biology, as model systems for studying the physiology and biochemistry of cells, the effects of drugs and toxic compounds, mutagenesis and carcinogenesis. They are also used in drug screening and develop-

ment, and large-scale manufacturing of biological compounds such as vaccines and therapeutic proteins.

As mentioned earlier, NCCS was conceptualized and initiated to serve as a national repository for animal cell lines. Since inception, NCCS has been providing cell cultures to researchers in academic and research institutions in India, thus enabling and supporting quality cell biology research by end-users across the country. More than 45,000 cell cultures have been supplied to over 450 organizations all over India, to date. Thus, the cell repository of NCCS plays a big role in facilitating high quality cell biology research not only at NCCS, but also at other organizations in the country.

The Centre of Excellence, 'National Centre for Microbial Resource' (NCMR) at NCCS has successfully undertaken the enormous task of obtaining several different microorganisms from a variety of environments across India, including the Western Ghats, the North East, mangroves, the marine environment, Lonar lake, industrial effluent-polluted

sites, and insect guts, identifying and preserving them in the laboratory in the form of 'cultures', and of further exploring their potential for application in biotechnology. NCMR thus plays a big role in preserving and characterizing the nation's wealth of microbial biodiversity. Being the single largest culture collection in the world, it has been pivotal in placing India among the top few countries with the largest collections of microorganisms. NCMR is recognized by the World Intellectual Property Organization (WIPO), Geneva, Switzerland, as an International Depository Authority (IDA) for the deposit of patent microorganisms under the Budapest Treaty. The Ministry of Environment and Forests, Govt. of India has designated NCMR as a National Repository for microorganisms under the Biological Diversity Act 2002. NCMR also facilitates high-quality research in microbiology in colleges, universities, other research institutions, and industries all over the country, by supplying microbial cultures and providing related services, such as identifying microorganisms using cutting-edge techniques. Furthermore,

it routinely conducts workshops to train students, faculty and researchers to use these cutting-edge technologies in microbial research.

### (b) RESEARCH

Cells are the 'basic unit of life', since bodies of all animals, including humans, are composed of trillions of different types of microscopic cells. Since inception, NCCS has been at the forefront of basic research in cell biology, which involves the study of the nuances of how cells operate at the molecular level, and of all the factors that influence cellular activities. Such studies are necessary to gain essential insights into how the body functions under conditions of health and disease. NCCS conducts research in diverse fields of cell biology, especially those relevant to addressing important human health matters like cancer, diabetes, obesity and other metabolic disorders, infectious diseases and immunity, role and functioning of the human microbiome and stem cells in health and disease, and regeneration of bone and other tissues. The state-of-the-art research at NCCS is focused on answering challenging questions through approaches that integrate modern and conventional disciplines, including computational and structural biology, genomics and proteomics, stem cell biology, immunology and microbiology. Through achieving the proximal goal of understanding the basic biology of cells, we aspire to help in the development of improved methods and treatment regimens / therapeutics to diagnose, manage and cure these diseases.

For more than three decades, NCCS has been a leading scientific institute known globally for its contributions to research in cell biology, with about 500 publications in leading journals, 17 patents filed and 5 patents granted over the past 5 years.

### Some Mega Projects (initiated / in the pipeline) - Manav: Human Atlas Initiative

The 'Manav: Human Atlas Initiative' aspires to construct a comprehensive map of the human body that will explicitly document macro to micro level information. In the initial phase, this

study will focus on developing a proof-of-concept using skin as the model system, by employing big-data mining and analytics; machine learning and AI (artificial intelligence) techniques to collate and annotate publicly-available peer-reviewed scientific literature relevant to the human body. The 'Manav' annotation platform will be developed to annotate, manage and visualize this scientific information. The large pool of the scientifically-literate population in India will be leveraged for this purpose. This will specially include students pursuing the bachelors/ masters/ Ph.D. courses, who will be trained to appropriately interpret and annotate the scientific literature using the Manav platform. In summary, project Manav hopes to simultaneously deliver an open source annotation platform, an organ (skin) model developed using this platform, and an upskilled student community. This is a collaborative project between NCCS, IISER-Pune and Persistent Systems.

### Establishment of the Pune Biotech Cluster - 'Model Organisms to Human Disease':

The goal of this collaborative project between NCCS and IISER-Pune is to enhance academic interactions between various institutions and researchers in Pune, and to provide an opportunity for members of the cluster to benefit from each other's expertise in developing animal models to address human health issues. Further, the BioCluster will develop high-end facilities and allied training workshops, which will be made available to this community. The BioCluster will thus also serve a platform for sharing and better utilization of the available national resources, and encourage and support start-ups as well.

### Indian Human Microbiome Initiative (IHMI)

There is increasing recognition of the significant impact that the human microbiome has on almost all aspects of human health, and the influence that several factors have on the composition of this microbiome. Therefore, there is a need to gain insights into the microbial diversity present in the different endogamous groups of India that have varied dietary habits and reside in

diverse biogeographic locations. The IHMI aims to comprehensively characterize human-associated microbes from carefully selected endogamous groups vis-à-vis their dietary habits, including key tribal populations which are not influenced by the modern lifestyle.

### Establishment of a GMP-compliant National Repository for banking, safe deposit and supply of characterized mammalian cells for use in biopharma

This projects aims to establish a state-of-the-art GMP-compliant National Cell Banking Facility. It will provide the facility of "safe deposit" cell line storage to the Indian industry. It will obtain cell cultures under license agreement for characterization, expansion and distribution to academia and the Indian biopharma industry at affordable costs.

### (c) Human Resource Development

NCCS contributes immensely to capacity building of the nation by generating highly-trained and motivated scientific human resource through several academic & training activities that benefit students, researchers & academicians from various organizations across the country.

NCCS conducts the Ph.D. coursework for students registered with the Department of Biotechnology, S. P. Pune University. The NCCS scientists also visit various educational organizations to deliver lectures and provide hands-on training for students in their own organizations. For example, the 'Edu-Bridge' teaching programme was initiated by NCCS at the Jankidevi Bajaj College of Science (JBCS), Wardha, a college supported under the 'Star College Scheme' by DBT. This program has enabled NCCS scientists to teach fundamental concepts of science through lectures & hands-on activities to students at JBCS, and has also provided the JBCS faculty with an opportunity to carry out short-term research at NCCS. Furthermore, visits to NCCS throughout the year provides students and faculty members from educational institutions across India with an opportunity to learn about cutting-edge science and technologies that they don't have exposure to at their

own institutions. Furthermore, the scientists at NCCS provide valuable mentorship and training in research to Ph.D. students, as well as Summer Research Fellows of the Indian Academy of Science) and project trainees (from various academic institutions), who carry out short-term research projects at NCCS every year. Since inception, around 300 research scholars have received the Ph.D. degree, and over 200 Summer Research Fellows & around 300 Project Trainees have benefited from the training and mentorship provided by NCCS.

Furthermore, NCCS also contributes to training students, academicians and researchers from across India by routinely conducting workshops in its areas of technical expertise, like 'cell culture technology', 'microbial identification, preservation and genome analysis', 'gene annotation', use of high-end bioimaging technologies, etc.

Outreach is another integral part of NCCS, which serves to educate the general public and students about diverse topics in science, to evoke and fuel scientific curiosity, and to foster a scientific temper. This is achieved through diverse means, such as :

Public talks by eminent speakers, including Nobel laureates; 'Open Days' at NCCS;

Display of exhibits at NCCS & extramural forums like the India International Science Festival (IISF), 'Vigyan Rail' (the science exhibition on wheels initiated by the Government of India), and Bharatiya Vidyan Sammelan;

Screening of science-themed films;

Articles published in newspapers and magazines in English as well as vernacular languages; Science-themed talks & discussions in English and local languages broadcast through All India Radio and delivered at other extramural science outreach forums;

Participation in science documentaries, such as 'Wise Spice', for telecast on national channels like the DD National channel, DD Bharati, Lok Sabha TV & Rajya Sabha TV, etc.

## 2. What are the core areas in which your institution specializes?

The research at NCCS encompasses and integrates the following areas:

Biology of cancer, communicable diseases, and metabolic and lifestyle disorders like diabetes, obesity, etc.

Stem cells & regeneration.

The immune system and pathogenesis. Microbiomes and Genomics.

Neurobiology.

Computational, Systems and Structural biology.

## 3. What sort of data does your organization collect?

NCCS collects and collates data from its own experiments carried out by individuals, as well as other population-based data that are available in the public domain as well as in restricted domains. The data are from individual experimental data (future scalable to en masse experimentation), descriptive data (again collatable with big data), clinical (only specified areas at present) and big-data.

NCCS's motto regarding data is "Data in any form are welcome".

For example, we collect data such as next generation sequencing, confocal images, live cell imaging, high-resolution images of cells/tissues etc, cryo-electron microscopy micrographs, proteomics and metabolomics data, DNA sequences, either 16S rRNA gene or whole genome sequences, and the related metadata about human volunteers and environmental niches, depending on the nature of the project.

## 4. How this data is analysed ?

Elucidation of biological data is dependent on the inherent complexity during assimilation of diverse experimental data. Therefore, analysis of data is a vast subject and one size/ approach does not fit all. Data analysis can be as simple as using conventional statistics, to highly sophisticated machine learning-based approaches.

We employ multiple open source/ academic license softwares to analyse the data generated from various modern and advanced technologies. For example, DNA sequence data are analyzed to see the correlation with human health, disease, and life style. For environmental data, correlation with environmental parameters is done.

## 5. How do you integrate the external data in your analysis?

Data comes from unlimited, discrete number of ways, certainly not in a Microsoft Excel sheet! Writing and validating algorithms that pick important aspects of public domain, collated/ reviewed sources is the first step to bring external data into our analysis. Often data sources do not have credentials that can be verified and it is good to keep such data not aside but analysis should be done before and after inclusion in the desired criteria.

Leveraging the different biological models/ public databases/ repositories and implicit assumption serve as a first starting point.

For example, TCGA, PUBMED, GENE BANK, CPTAC, PRIDE, PDB, CCPEM, UniProt, MetaboLights, Omics DI, DADA, MOTHUR, PiCrust, MG RAST etc are routinely employed in our research.

## 6. On what parameters the data is analysed and utilized to improve the research and other areas of your institution?

Methodologies change as per the need. Parameter estimation depends upon the sensitivity and specificity of varying biological problems. Selection, refinement and reduction of the datasets depend upon experimental validation.

In most cases, data are very well curated and annotated. Otherwise, they are checked for these before use according to the required research questions and themes. For example, the data are utilized to understand the correlation between the microbiome and health, and are useful to improve human health. In the case of environment, data are used to understand the effect of environmental perturbances.

**7. What problems are being addressed / sought to be addressed by the current level of data collection by your institution?**

Multiple challenges remain with respect to data collection, storage, sharing, security and upkeep. These are being addressed currently. For example, at the infrastructural level, we need to expand and generate a common platform for easy sharing and efficient processing of data.

**8. How the efficient data capturing supported improvements in the processes?**

Data science has enabled us to quantitatively lay a mathematical framework and answer the biological hypothesis drawn out of intuitive models.

For cryo-EM, advancement in the detector camera has helped immensely. Direct electron detector cameras are very fast, accurate and precise. This has led to the cryo-EM revolution that the field of structural biology is witnessing. In terms of proteomics and metabolomics-oriented research, the availability of the latest and most sensitive high-resolution accurate mass spectrometer and a variety of downstream data analysis software packages have led to accurate, reliable and reproducible data analysis for different scientific projects being run at NCCS, Pune.

**9. What are the challenges faced in data collection and analysis? (data privacy, misuse, inaccuracy etc.)**

Any information collected from individuals must go through privacy policies. There are no exceptions. However, it is important to debate the exceptions as well as usage policies. These have to be evolved both for individual as well as at the community level, providing impetus for further collaborative research.

**10. How do you inculcate the culture of effective collection and use of data across the various functions in your organization ?**

Only through practice.

We follow all government policies and norms.

The data sets used for research and that



form a major part of publication etc, must be archived in raw form so that it can be shared with other scientists and researchers if required. For the proteomics and metabolomics research pipeline at NCCS, we positively deposit our experimental raw data to various globally acclaimed publically available scientific repositories like PRIDE and MetaboLights. Similarly 3D structures-related data are routinely deposited at PDB. In case of microbiome research, before the researchers go for the collection of metadata, there is extensive training and the sequence data are monitored for quality using various controls.

**11. How can data help in research and innovation ?**

Every sphere of research uses data, and innovation is simply the events/ occurrences that get spotted only by dedicated researchers. Pattern recognition is the key to innovation.

Data form the lifeline of research. The same data can be analysed in various different ways and can open up new avenues of information and knowledge based on how they are analyzed depending on the intellect and thought processes of the researcher. Hence, it is very important that raw experimental data are preserved and are made available to the whole scientific community, so that others can have access to the variety of experimental data obtained across various research institutions throughout the world. This can help save on and make optimal use of resources in terms of manpower, money and time.

**12. Can you highlight the possibilities of collaboration with industry and other stakeholders in the Data Sphere ?**

Collaborations with industry can

encompass almost all the aspects of data i.e. acquisition, collation, storage, storage architectures, and analytics, depending on the interest of the industry. NCCS has expertise in almost all of these areas and it is putting in efforts to further enhance its capabilities in the future. For example, with respect to diagnostics methods, population-specific results and analysis could really help a country like India to tailor diagnostic approaches in ways that suit its ethnic population. Similar concepts can also be applied to therapeutic approaches. For this, collaborations with the industry are inevitable. To summarize, data in any form are welcome! It is highly desirable to collaborate with the industry and other stakeholders interested in developing algorithms and software for fast, efficient and automated data processing, analysis, storage and sharing of data, such as those resulting from cryo-EM, proteomics and metabolomics work.

**13. Can you give your views on Pune's position on the Data front of India?**

Pune being an IT hub has great potential for industry-academia collaborations. Pune is home to top IT companies/ talent as well as top academic/ research institutions in all the major domains, such as biology, chemistry, physics, material and environmental sciences. More interactions and cross talk could result in effective and productive exploitation of the existing technologies as well as evolution of new ones for the future.



# The Data Story of PCCM

*In conversation with the MCCIA team, Dr Santosh Dixit and his colleagues highlight how data plays a crucial role in cancer treatment and research*

## Q1 Can you tell us about the start of PCCM?

Prashanti Cancer Care Mission is a public charitable trust which started in 2001 with the aim to support cancer care in Pune city. In 2009, the trust started a medical arm, Orchids Breast Health Clinic which is a dedicated breast cancer hospital. Prashanti identifies with 4 major activities:

1. The Medical arm – We have an in-house radiology, chemotherapy team and we have a tie-up with Jehangir Hospital for surgery and a tie-up with Inlacs Hospital for radiation therapy.
2. The community arm – Being an NGO, a lot of our focus is on social impact activities. This involves breast cancer awareness campaigns, community screening programs, fund raising under the aegis of pink ribbon support group.
3. Educational training – Prashanti runs an active training program for breast cancer surgeons to learn advanced techniques in Oncoplastic Breast surgery. We also conduct training exercises for research scientists for various aspects of cancer research.
4. Research arm – Clinical and Translational Cancer research takes place here, which involves public health, epidemiology, genetics, radiology, breast oncoplasty, chemo-radiation outcomes, integrative oncology with Ayurveda interventions etc. One of the major research focus is on triple negative breast cancers which is an aggressive clinical subtype highly prevalent in Indian women.

The centre was started by Dr Koppikar who is a famous cancer surgeon. He got together with a few like minded people and started fundraising to help cancer patients with their course of treatment. Over the years, Prashanti has evolved into a prominent breast cancer treatment and research centre.

## Q2 What kind of data do you collect?

Our cancer database comprises of many parts. First, there is data in the community which for examples tells you the prevalence of breast cancer in the

city. Then there is data from a family which tells you the risk of developing a cancer in a family. The third part is the data at the individual level. Typically, data in our cancer clinic (at the individual level) ranges from patient demographics, medical history, radiology screening, mammography images, biopsy results, surgical treatments, surgical outcomes, follow-ups, genetic mutations, protein expression patterns etc. Another important aspect of cancer which is usually not talked about is the psycho-social aspect as detection of cancer can trigger anxiety and depression in an individual. So, an important aspect of breast cancer management is psycho-oncology. It is crucial to collect data from the patient to understand how they feel mentally about the treatment. This is known as PROMs (Patient reported outcome measures). This goes hand in hand with the clinical research. This data is collected through a standardised questionnaire called as Breast-Q which is internationally validated.

Our data collection starts in the clinic from when a patient comes to us. First, the patient undergoes radiology screening and if a lesion is detected, a biopsy is done to detect whether there is a cancer. Then, the course of treatment is decided after a few more tests are done. The nursing staff collects all the patient information right from the start. This is our basic data source. This data is collected manually and in hardcopy formats. Then, this data is bought to our research centre and is manually entered into our digital data capturing platform and the data is stored in our SQL database. The data collected and stored is done only when patients willingly consent and agree to share the data. The storage of data in the clinic is done under ethical guidelines and approval of independent ethics committee registered by Government of India regulatory body ( CDSCO).

## Q3 What kind of analysis is done on the data?

Our research covers many fields. One side of it is very clinical where we look at the types of surgeries done and their

outcomes for which we analyse a lot of surgical and medical details. We also do translational research with biological data where we analyse our bio-bank of tissue samples collected from patient and correlate that with the clinical outcome of the patient. We also profile the tissues for different biomarkers to see if any actionable biomarker can be taken as a repurposed drug to treat various breast cancers in India and to see if any new biomarkers can be found for diagnosis and prognosis. In addition to this, we also analyse genetic data, to understand genetic mutations that may predispose individuals and their families to hereditary breast cancers. Another important aspect of our data analysis is cancer prognosis. Prognosis involves predicting whether the cancer will reoccur and when, what will be the progression of the disease, whether the patient will respond to a particular type of treatment etc. This prognosis heavily relies on from patient history, genetic mutations, biomarkers. We are trying to build prognostic tools/models which will help clinicians understand how a patient's cancer is going to progress. We use R, SPSS and a few other statistical analysis tools for this purpose. The whole cancer screening, detection and treatment process is a data driven and data enriching process.

## Q4 What are some of the challenges you face in the data pipeline?

The first major problem we face is convincing the patients that their data and tissue samples are being collected for a good cause. After the patients have consented to allowing us to collect their data, the second problem is actually following up with the patients and ensuring they deposit the data with us. Third problem is that the raw data needs to be cleaned and this involves a lot of manual curation. We are looking out for platforms and algorithms to help us digitise this data capturing and cleaning process. Another major issue we face is training our clinical staff to understand the value of data to ensure that this entire data collection and recording process is done in a systematic and precise manner. A last but important

problem is that clinicians don't have time to record the important data during their medical duties due to the work load which can result in knowledge gaps about the clinicians' thought process in handling the patient management paradigms.

**Q5 Can you tell us about some of the main collaborations you have going on?**

We believe in the philosophy of multidisciplinary research and have many collaborations going on currently. We are collaborating with National Chemical Laboratory (NCL), National Centre for Cell Sciences (NCCS), Savitribai Phule Pune University and Symbiosis International University in Pune. In the private sector, we have collaborations with Persistent systems and Tata Consultancy Services (TCS) for the cancer big data mining, bioinformatics and AI/ML projects. We also have collaborations with organisations in UK and the US. The collaboration with US National Cancer Institute (US-NCI) has resulted in organising the 1<sup>st</sup> ever The Cancer Genome Atlas (TCGA) conference in India in 2019.

We also collaborate with the Centre for Complimentary and Integrative Health (CCIH) at Pune University. This centre studies the impact of ayurvedic medicines on cancer patients. In collaboration with them, we are trying to study how some well-established ayurvedic drugs improve the quality of life in chemotherapy patients.

The context of cancer care in India is characterised by high incidence, late detection, lack of access to quality affordable care to majority of the populace and poor treatment outcomes, together resulting in high mortality rates. These observations indicate a serious and growing public health burden that needs to be addressed with renewed efforts. This is why we have undertaken the following projects in collaboration with other institutions, with support from the Government of India.

Community Screening project – Breast cancer is one of the most common cancers in India. Luckily, breast cancer can be screened easily with the help of clinical breast examinations and mammography. The Government of India in October 2018, had come out with a mandate stating that all public health centres would carry out screening programs for the community. Our screening program was based out of a

mobile van which has a mammography machine in it and was operated by trained medical professionals. The van moved from community to community, giving breast cancer awareness talks and screening the women in the community. This project was funded by the Tata Trusts and over a period of 18 months, we were able to conduct about 280 screening camps, sensitise over 50,000 women, screen 6000+ women using clinical breast examination and mammography which resulted in identification of 6 cancer cases from the community. All individuals who were detected were breast cancer were given free or subsidised treatment at our cancer clinic.

TCGA India project – The Cancer Genome Atlas (TCGA) originated in the United States and has evolved over a period of 12 years with investment of over 300 million USD from US government. This project completed multi-omics profiling of 33 major cancers and 10 rare cancers which are relevant to the US population. This open source project funded by the US government has greatly impacted the cancer ecosystem and has led to the creation of many new diagnosis, treatment and prognosis paradigms for all cancers. Many successful start-ups that model this data have emerged thanks to the TCGA impact. Pharma/Biotech companies with cancer portfolios have been immensely benefited by TCGA.

Now, as mentioned earlier, cancers in India are unique and have their own characteristics. So, there is a need to conduct a similar study for the Indian population. With this thought in mind, in September 2019, PCCM along with IISER Pune and Persistent Systems have proposed to Indian government science agencies such as CSIR and ICMR to conduct such a study in India as well. This study will focus on India specific cancers and shall start with profiling of breast cancer.

**CTCR Project –**

This is a joint initiative between PCCM and IISER, Pune which aims to combine the expertise of clinicians and researchers to study and find solutions of cancer problems relevant to India. The centre is a first of its kind initiative in India with world class infrastructure and facilities for multidisciplinary training in translational cancer research. Genome India –

The Government of India through the Department of Biotechnology has

started a genome India project which involves creation of the Indian genotype where they plan to sequence 10,000 healthy individuals. Understanding the baseline mutations will help understand which are the disease-causing mutations. CTCR will be one of 12 clinical sites for recruitment of subjects in this national mission project.

**Q6 Why is there a need to do breast cancer research in India and what role does data play in it?**

There is a need to do breast cancer research in India because the breast cancer in India is not entirely the same as the breast cancer in Western countries. In India, we see a very high number of late stage cancers, which is a very peculiar characteristic of Indian breast cancer. In India, the onset of breast cancers is in women in their early to mid-40s, which affects the working women. Whereas in Western countries, the onset of breast cancers in women is in their mid to late-50s. Most women affected by breast cancer are also in the urban populations and not so much in the rural populations. Another distinguishing factor is that there is a very high percentage of triple negative breast cancers in India, which is a very aggressive form of breast cancer. These are the unique attributes attached to the Indian breast cancer situation. These are the issues which need to be investigated by studying the Indian population.

Now, data plays a crucial role in all the aspects of cancer. Research on all aspects relies heavily on good quality data. The medical treatment which is given to any cancer patient is based on a rationale which depends on the data generated through clinical research. This data drives clinical decision making and this is called evidence-based medicine. We are trying to improve our data storing and mining processes so that all the key data points become available to us which leads to better clinical decision making and asking better research questions. The trends in medicine are also changing. In the near future, doctors will have access to all patient data on one platform and will be able to take clinical decisions on the fly. We believe PCCM will play a major role in improving the cancer ecosystem in India and will help put Pune on the map for cancer treatment and research in India.



# The Data Story of TCS

*An Interaction with Mr Dinanath Kholkar, Vice President and Global Head of Analytics and Insights, TCS Ltd.*

## 1. Can you brief us about your organization, and what it does?

Tata Consultancy Services is an Indian multinational Information Technology (IT) and consulting company, head quartered in Mumbai. We are part of the Tata group and have operations in 149 locations across 46 countries. In the Digital Era, TCS has strongly emerged as the growth and transformation partner for our customers, helping them create the future. TCS combines tech expertise and business intelligence to catalyze change and deliver results using our Business 4.0™ thought leadership framework.

I am the Global head for TCS' Analytics & Insights business that covers the entire Data Value chain, with expertise in delivering business outcomes with real time insights, Data Maturity models, Data Management, Data Estate modernization, Advanced Analytics and AI. We have been strong proponents of the "Data-centricity" and "data-democratisation" agenda for our customers and helping them adopt digital technologies with Agile practices.

Pune has traditionally been a hub for our expertise in data & analytics for customer engagements and it is very well augmented with the research we do at our innovation lab TRDDC. My move to TCS Pune from Mumbai in mid 90s was to set up research teams in the areas of data warehousing and data mining and create a foundation for our Business Intelligence practice then.

## 2. What is the biggest tech challenge your clients face in ensuring data is at the heart of their digital transformation strategy?

Digital-first companies with embedded digital technologies such as AI, Big Data and analytics, Cloud, IoT, have an upper hand but legacy businesses can also benefit by "democratizing data". Taking advantage of this, data will help them thrive through faster decision-making, enterprise agility, improved customer experience, operational efficiencies, and new products.

As the data is growing at an exponential pace, I see that the success of an organization depends on its ability to collate, synthesize, analyze and glean insights from data. They also need to put



the data in context of the business to derive accelerated business outcome. However, the success can only be limited if businesses with immature analytics capabilities operate in "data fiefdoms" where pockets of insight-generating analytics benefit only one part of the organization. They need to have high data literacy index across the organization, and leverage both structured and unstructured data that are being generated both from within the organization and its eco-system consisting of its partners, and suppliers, to glean actionable insights.

We need to play a crucial role in evangelizing the need and importance of data-centricity in a wide range of industry stakeholder including policy makers, corporations, and government bodies. Hence, to enable this, it is important to contribute to multiple industry fora and industry lobbies such as IEEE and ICDMAI. Academia, researchers, and industry key experts in these relevant bodies are an important source for us to tap and build connections with. In today's digital world, everything is connected and has potential from either knowledge, innovation or commercial perspective. These forums also provide a relatively informal, yet knowledge-based platform to interact with decision makers and help define the policies.

## 3. Your thoughts on sustainability and innovation

Tata Group is seriously committed to integrate environmental, social and ethical principles in our core businesses to enhance accountability. Interestingly, 66% of the equity share capital of Tata Sons is held by philanthropic trusts that

support education, health, livelihood generation for the needy and protect the environment. Tata Group assists our customers and partners in their sustainability agenda, while developing competencies and solutions within the different businesses of the Group.

TCS gains a lot of industry insights about the market and its trends from our customer connects, sales pursuits, presence in industry bodies and participation in industry events. Over the past few years, Sustainability is coming out as a common theme in many of our customer & market interactions which signals the corporate interest in this space. TCS Europe has been working with industry leaders on Sustainability including in WEF Davos and European business Summit.

Sustainability, currently driven by the UN Sustainable Development, is fast becoming a play for the corporates where material topics impacting the businesses are being looked at as strategic focus areas. Not just for the compliance and social (CSR) part of it, but also for the new opportunities it can unveil for operations

optimization (to improve margins) and new product innovations (sustainable product lines adding to the topline) thereby bringing on innovative offerings and business models. In the process, environmental & societal contributions are enabling governments to achieve the UN Sustainability targets for the planet. In this whole journey we believe that there is a strong play for Data & Analytics.

Opportunities exist in areas such as compliance, operations, and green product lines. TCS has been pursuing the theme of sustainability across industry verticals and creating an ecosystem of both internal and external contributors, which will eventually lead us to a knowledge and innovation ecosystem capable of shaping up a sustainable future.

## 4. Can you tell us about TCS Innovation journey?

TCS invested early in research and development to drive innovation across our client businesses. We set up India's first IT-based research lab – the TRDDC at Pune

– in 1981. Several research programs were initiated and brought to bear on TCS' core tech business in the following years. This effort acquired fresh momentum when the corporate technology office was set up in 2006, under our CTO. The Research and Innovation function became more formalized and outcome-driven over the following years, and we now have innovation labs focused on many of the core disruptive technologies impacting our customers worldwide. Multiple products and solutions have come out of these labs, for example, Mastercraft™ for model driven engineering or ignio™ for AI driven IT Operations.

Over the past year or so, TCS has embarked on a journey to embed research and innovation, in each business unit and customer account. So, we now have a 'two-tier research and innovation' structure, with a corporate team and corresponding unit-level teams; the corporate research teams focus on H3 and some H2 research, while the business units bring in the customer insights and work towards the H1 innovation.

To foster the culture of innovation, TCS has annual TCS Innovista contest, where the best innovations get the opportunity to benchmark them self. Through a series of objective and thorough evaluation, the winners of each category are declared. Some of the key categories include focus on innovation in new products and services, innovations that are yet to be commercialized and best platforms. We also recognize those innovators who have tried but not been successful with our "dare to try" category.

TCS Innovista is designed and run much like Tata Group's namesake event. The best of TCS Innovista's entries often find their entries to Tata Innovista. Over the years, TCS has won multiple awards in the Tata Innovista.

**5. Your views on how data is influencing business**

Data is the DNA of the Digital eco system and it is clearly enabling new business models and transformations. New partnerships are being set up based on data and we are seeing an emergence of data eco systems supported by data market places.

In this digital world, a confluence of factors including economic disruption, rapid re-skilling & unprecedented

access to data is sparking a birth of new-age data Renaissance. Over 50% of the organizations consume and analyze open data to help them identify and understand customers and rapidly evolve ideas and information products. Data, technology & research are giving rise to immense possibilities for not only business but social transformation as well; there is inherently a synergy between the two. This is where Purpose-driven Enterprise comes into play, which goes beyond financial targets. Data becomes the central character in this symbiotic story - delivering commercial value if used with business intent while generating social outcomes if used as social lever.

At the same time, the availability of open and government data sets finds its utility in creating Intelligent services under Smart Cities programs, which in turn generate voluminous data that can be fed back into the ecosystem. Hence the Abundance lies in data sets, opportunities of innovation, and the technology levers to implement them. It could be noted that the exponential growth of data has led organizations to tap into a new dimension – Data for Good.

Organizations are moving from product to purpose driven enterprises addressing humanitarian challenges in healthcare, sanitation, wellness, education and the environment. Recently, we had published a coffee-table book, pArIvartana that highlights the role of data & analytics for social transformation. The book covered major aspects such as health & wellness, green agriculture, policy & administration and science & technology. This has opened up possibilities for aligning with goals of CXO's of some of our esteemed customer organisations.

**6. What do you expect 2020 to be like for the data and analytics industry?**

The demand for data, analytics and AI continues to grow. While larger enterprises are looking for opportunities to shape up eco systems or participate in one, the SME sector is also adopting digital in a big way and will have a critical dependency on data and analytics.

We are at the cusp of the decade and this year we need to define the balancing point among profits, people and planet. Data is the foundation towards digital transformation and central to all these aspects. At the same time, AI would also play a crucial role in accelerating the transformation journey.

Organizations are leaving a world of constraints and entering an Age of Abundance: of digital data and the technology tools to create innovations from that data. As a service provider, our success depends on how we enable enterprises today to shift their business paradigm from optimizing scarce resources to harnessing abundance, democratizing data and magnify the power of ecosystem.

While there is some good progress in business and economy, there is some awareness and push towards social and wellness state of the employees and stakeholders. Data & analytics can drive a positive change, stemming from the abundance, it can enable an organization to be more responsible and purpose driven.

**7. What are your thoughts about sustaining or increasing the competitiveness of Indian IT industry using Innovation as a fulcrum?**

Fostering a culture of innovation will lay the foundation for an organization's success. At TCS, we understand our clients' business priorities; and to drive growth and transformation for them, we develop a strong knowledge base leveraging the contextual knowledge and constantly move up the value chain. This has to be combined with a significant focus on the workforce transformation and analytics and behavior science will play a very important role in this journey.

From a services-centric business model, we need to evolve platforms and products that address client's business challenges. These need considerable amount of investments and high-risk appetite. As we move into the digital economy, we have to drive a considerable innovation on our services and prudently leverage new-age cutting edge technology to beat the competition and stay ahead of the curve. At TCS, we are betting on three Ps viz. Patents, Products and Platforms to build a new business model



# BIM Facility Management Revolution

Shashi Kadam

## BIM revolution

BIM revolution has already reshaped the infrastructure world. As everything around us getting digitalized, analyzed, smart and intelligent no establishment can afford to miss this revolution, be it manufacturing factories, commercial spaces, or houses.

We have invested a lot in real assets like Buildings, Plants, Machinery and necessary ancillary services. Ample data is generated during the design, construction, installation, and operation of the facility. Presently this data is in form of design sheets, manuals, abstract diagrams and sometimes in excel sheets. This data is required every day during the lifecycle of that facility for Operations, Maintenance, Disaster management, Modifications and handover of the facility. BIMFM process is about capturing all data from design, on structure, installations, operations and maintenance in digital form. BIMFM facilitates efficient use of the facility. The data shows it brings huge savings in operational costs of a facility.

## Why BIMFM?

Typically, in any establishment, we have a lot of asset data like building plans, spaces, room layouts, services layouts, equipment, machines, and HVAC installations. For an efficient and smooth running of the facility, this data needs to be organized, maintained and updated regularly. This is where BIM comes in. BIM process involves the creation of a digital twin of your facility. It will have all the data of your facility which can be very efficiently used. Imagine if you want to go someplace in a city, you have a few options. You have to physically know the route, or ask many people for information, or take a map of the city and locate the route. You have another option, use Google Maps and type name of the place and you have all necessary information like route, distance, time to travel, traffic conditions, parking situation, etc. all this in seconds.

BIMFM does the same you, digitalize all data of your facility and

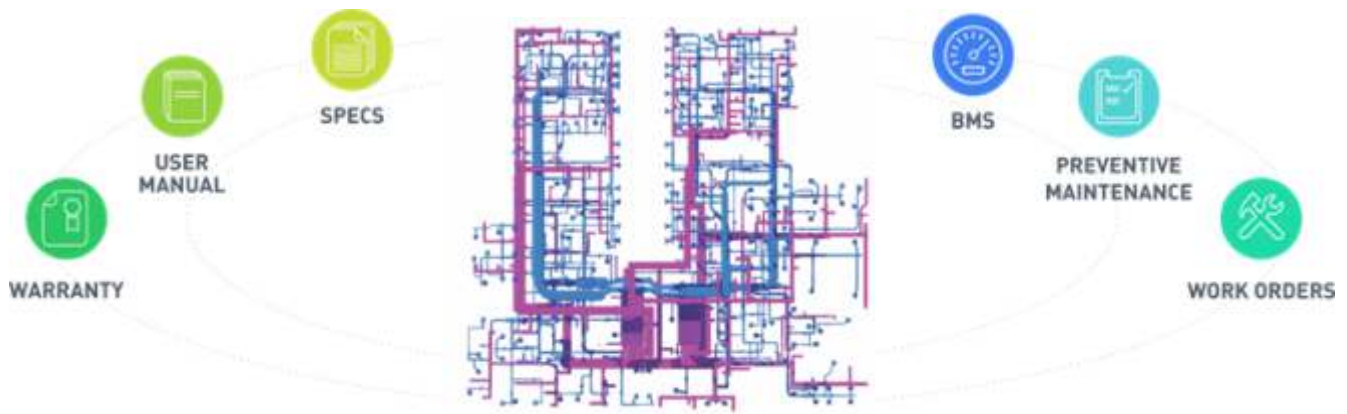


create a digital twin and you have all data at your fingertips. This data can be used for quick Maintenance, modifications, space utilisations, efficient energy utilisations, disaster management, operational training to the users. You can perform what-if analysis on digital twin without any real cost because digital twin has all properties of the real facility. BIMFM gives you total control over your facility.



There are many ways a facility can use BIMFM. The basic steps in general can be summarized as follows.

1. Establish the purpose and goals of BIMFM implementation. This is the most critical step. It requires an expert in BIMFM and the involvement of the client. Every facility has a different purpose and unique requirements.
2. Based on the BIMFM implementation plan, the next step is to gather data from available sources. For example building, data can be gathered from design documents, construction documents, equipment or machinery suppliers documents. It may also involve collections of data at the site.
3. Once the data required is gathered, it cannot be used as-is, The data is analyzed and filtered to align with goals of BIMFM implementation.



There might be a case of missing critical data that is required. Analysis of data will underline these missing data.

4. Based on analyzed data, BIM model data structure and documentation are developed in line with operational requirements.
5. Once the BIM model enriched with required data is ready it can be put to test and implement in real operational use. This requires operational query forms, information pullout processes, data updates to the existing model.
6. BIMFM is a continuous process BIM model is live and fed with operational, maintenance, modifications, etc as they happen in the lifecycle of the facility. All operational data is captured and updated to the BIM model. This is done so that you always have the live status of your facility otherwise this digital twin will have old irrelevant data.

“BIMFM creates all assets database at a single place which enables huge savings in operational cost of a facility”

The most crucial step in all the above is the first step about establishing the purpose and goal of BIMFM implementation, The process outlined here is generic and can be implemented for new, old facilities.

**An example of BIMFM implementation:**

Take an instance of a Manufacturing unit with the administrative office.

This is a 15-Year-old facility with an area comprised of different processing zones.

1. Purpose and Goal: Create a single source of information for the facility. It shall provide all information for asset data, preventive maintenance, modifications and operational data like space management of the facility.
2. Data Collection  
As this was an existing facility, Building data were collected through actual measurements at the site. All equipment, machinery data were collected at the site with supplier documentation.
3. Data analysis: After analysis, we found that a lot of data that was critical to operations was missing. We devised a plan to acquire the same for BIMFM requirements. A critical machine maintenance schedule was missing so it caused disruptions in operations.
4. We used Autodesk Revit to erect the BIM model of the building which included all critical data of building like HVAC service, Machine installations, manufacturing Spaces, fire fighting installations, etc including office space.
5. Now BIMFM model is ready to be used for operations.
  - a. There was a need to replace a machine to suit a new order workflow. The FM model was used to perform the simulation of replacement with a different

combination of workflows to find the best location for a machine for efficient operations. After this digital exercise real work of shifting has flawless implementation at the site without any trial-error and loss to production time. New locations were updated in the BIMFM model.

- b. A certain area of roofing needed replacement. BIM model located the area created specifications and quantities for cost estimates and work orders. The contractor has clear instructions, locations, specifications for installations through the BIM model.
6. The continuous updates of assets to the bim model ensures a single source of truthful information for any future operational requirements.

All this information is live and accessible 24X7 to the authenticated users of the facility through PC and Mobile.

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# Customer Partnered Innovation

Dr. Uday Gosavi



The conventional means of competitive advantage (financial, strategic and technological) to date, led to the building of better products and services, competitive pricing etc. The uplifting of mankind was the sole driving force behind innovation. What it ignored was the environment we were getting uplifted in. Similarly, merely down-sizing as a tool of competitiveness, in my opinion, is harmful to societal economy, as with down-sizing comes reduction in renewable expendable income, the very basis of consumption. The world went around believing that simply hiring the best people would enhance Organizational Capability, which it did. However, one has to bear in mind that organizational goals are accomplished by people and that nurturing and developing an empowered leadership capable of taking decisions needs to be evolved at all levels in the work chain.

The role of these leaders, at all levels in the organization, besides striving to achieve organizational goals, which they do strive to achieve, should also encompass keeping alive the spirit of change. As some thinker has said-Change is the only constant. We have collectively cocooned ourselves in either hyper or mild status-quo fearing that change will damage our existing business model. To draw from an existential example, man has to change his lifestyle to stay alive, change from a sedentary, smoking-drinking, unhealthy eating life-style to a one with exercise, non-smoking, moderate drinking and eating healthy life pattern. So do organizations need to change to a more healthy organizational life pattern. If your organization refuses to change, someone else will execute changes which could put your existing organization at the risk of extinction. It is always more prudent that you kill your own

product by bettering it with incremental changes or substituting it with your own new product. The whole process of change needs iron willed leaders that are willing to flow against the tide. Attention shunning, iron willed leaders redefine organizational core business despite opposition or skepticism from peers, investors, colleagues or competitors. The path is arduous at best. To adapt Longfellow to industry, "Heights by organizations reached AND KEPT are not attained in single flight". The iron willed persevere and succeed, beginning in small increments culminating in path breaking innovations of products, manufacturing processes or management principles.

The present times are scary for almost the entire population, both employed, self-employed and retired. Most Owners/ Managers/ Shareholders err in concentrating only on organiza-



tional capabilities and disregarding people capabilities. It is true that fingers are unequal and so are people. Recall the adage “A chain is only as strong as its weakest link”. The Owners/ Managers/ Shareholders myopic vision for overly financial rewards, subsumes the apparent pitfalls that cast their shadows of the future. It is the Owners that need to lay weight on the dilemma of Substance versus Disruptive Innovation. I call this The Tonga Moment, a fall back to the days the horse drawn Tongas ruled the streets and opposed the introduction of the ubiquitous Rickshaw or Auto as it is called in some regions, as a more efficient replacement. This sword hangs on all organizations. A recent example of this is the Kodak Films which did not see the sweeping change to digital cameras coming. Small hungry organizations change the rules of the product, the market and existing market strategies with greater agility as compared to entrenched organizations.

In the 21<sup>st</sup> century a new paradigm of “Environmental Protection” has evolved. The concern for the environment is the new disrupter, whose shadow was cast as far back as the late 1980's which we collectively failed to see coming. Now that the environmental monster is at our door, it needs to be confronted. A self-inflicted wound is the huge growth in population spurring consumption, with attendant environmental degradation. There are many

“solutions” put forth by many experts. A small step could be the replacing of polluting solvent borne degreasing with water borne degreasing. Or say replacing neat oil machining with say water dilutable machining fluids, or even a harsh acid based de-rusting with something more human-friendly and environmentally friendly. Of-course, these would be a stop-gap solutions, needing a more long term answers. Unfortunately, what we call friendly today could be proven hazardous in future research. The classic example is that of Benzene that was rampantly used in the industry till it was proven cancerous. This needs long sustained efforts for fruition. The path of human progression will be littered with environmental damage. Efforts will be made to sustain “progress” technologically by attempting to minimize its harmful effects. I firmly believe that elimination of environmental damage is impossible and as such some environmental damage is inevitable.

One way to simplify the progress to limiting environmental damage is the Stephan Thomke and Eric von Hippel propounded concept of “Customers as Innovators”. I shall not dwell on their theory, but shall try to expand on the concept. There would be this industry in some corner somewhere that has commenced asking their customers for a “Pain Wish-List”. There is always a pain area in every organization and a Leader of the process is best able to

identify it. By working with such process leaders they will have been able to resolve pain in some industries. A small beginning nevertheless being made using the customer as a catalyst for innovation. Addressing a pain of the customer is a far more useful tool in bringing sustainable change than thrusting a product that the manufacturer feels is innovative. There is similar pain in all industries making the same or similar products, which when identified by one empowered leader in one industry, can be horizontally deployed across the industrial segment as a whole. This approach too has no short term remedies and requires long term commitment of the supplier organization and customer organization, to overcome pit-falls and ultimately remedying the pain area.

To sum up, customers as innovators involve an iron-willed empowered leadership, open to change and willing to stubbornly overcome hurdles on the way, partnering with suppliers who have similar qualities and do not look at any customer/ supplier initiated endeavor as purely a short term profit incentive can effect the change essential to overall progress with environmental concerns knowingly addressed.

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## OFFICE PREMISES ON LEAVE & LICENSE BASIS

Dear Members,

As you are aware that Maharashtra Chamber of Commerce, Industries and Agriculture constantly strives for the betterment of the industrial development. One of our missions is to facilitate industrial growth while balancing socio-economic environment and also to ensure the finest infra structural development and facilities with a futuristic edge.

With this view in mind, we would like to extend our infrastructure support of the following available premises to be let out on leave and license basis:

### Tilak Road office:

Office space on 2<sup>nd</sup> & 4<sup>th</sup> floors totally admeasuring 2336 sq. ft. (1168 on each floor) in AR Bhat Bhavan, Mezzanine floor 770 sq ft (Semi furnished) in MCCIA main building, Tilak road, near Swargate, Pune 411 002. Round the clock common security and DG power back up available, Lift available for AR Bhat Bhavan. Parking facility available.

### Bhosari Office (Near Quality Circle, Telco Road):

Office space 1800 sq. ft., on 1<sup>st</sup> floor of Navalal Firodiya Center of Excellence, separate WC provided for this area. Ample parking for 2 and 4 wheeler vehicles. Round the clock common security and 'limited' DG power backup available.

### **Preference will be given to members of MCCIA**

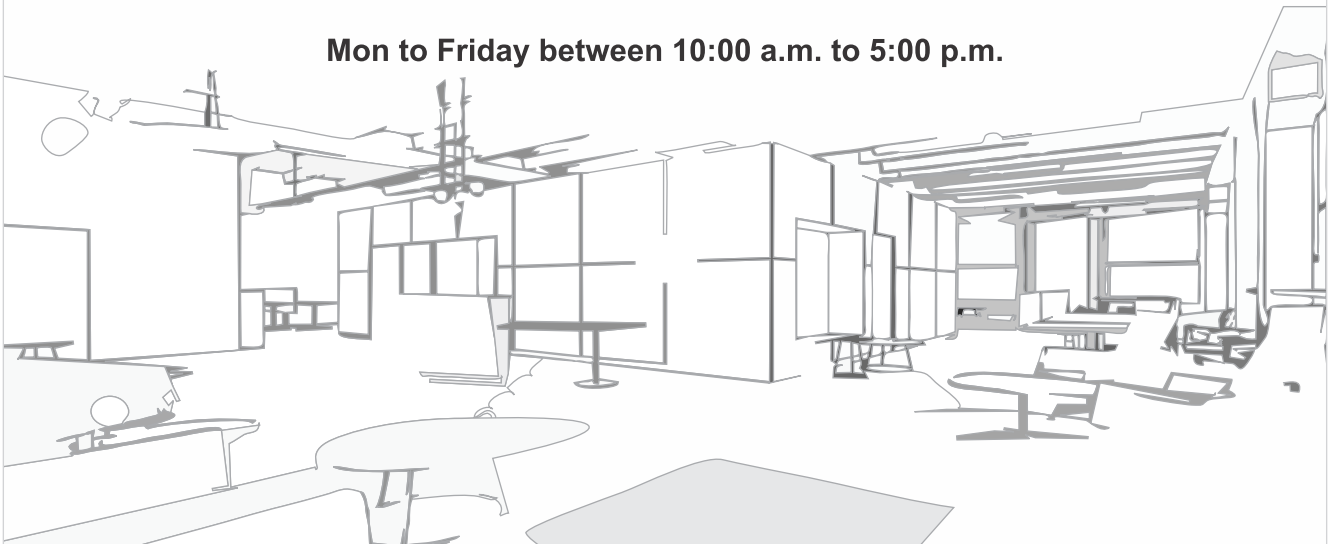
Interested parties please contact:

Mr. Prashant Joglekar (9822425268)

Mr. Shrikrishna Gadgil (9822315777)

Mr. Arun Khisty (020) 25709000

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**For more information & Booking co-ordination please contact : Mahesh Kabadi**

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