MISSION

Namma Karnataka-
Gateway to Future India

VISION

Look Beyond

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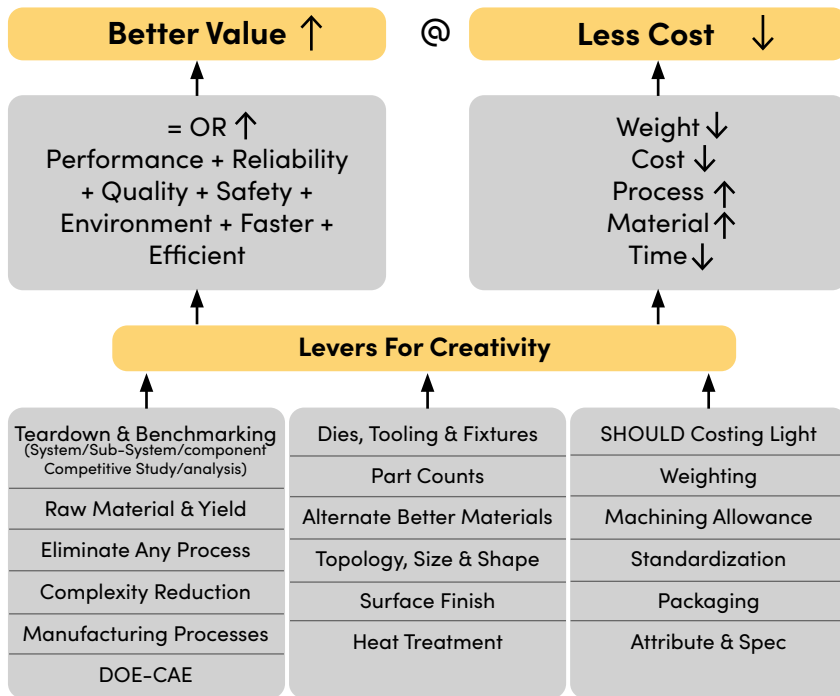# VAVE –Value Analysis Value Engineering: Better Value Product at Less Cost

VAVE is a methodology to identify Primary function (which contribute higher value) & Secondary functions in components of product, based upon design intend requirement and then focus with ideas on primary functions to produce at better value and Less Cost.

Key Objectives

- To Identify Function of an item to meet intended outcome
- With better value at Less Cost
- Value Management on existing & new product or process
- Intended to achieve the desired functions of a product or process at minimum cost
- Applied on existing product or process and also for new product design
- Multi-disciplinary Collaborative & Structured Approach
  (Cross Functional team – CFT)

Below chart shows various levers adopted to create better Value pf product at Less cost. This methodology is extensive used in Automotive industry in existing product at systems, sub-system and component level for product margin improvement as well is in designing new products. This framework runs for a week where cross functional teams meet together with focus object on identified sub-system or component to generate ideas. First Level of decision are taken during workshop and subsequently detail design validation starts. But VAVE methodology can be applied across industry.

Better Value ↑	@	Less Cost ↓
= OR ↑ Performance + Reliability + Quality + Safety + Environment + Faster + Efficient		Weight ↓ Cost ↓ Process ↑ Material ↑ Time ↓

Levers For Creativity

Teardown & Benchmarking (System/Sub-System/component Competitive Study/analysis)	Dies, Tooling & Fixtures	SHOULD Costing Light
Raw Material & Yield	Part Counts	Weighting
Eliminate Any Process	Alternate Better Materials	Machining Allowance
Complexity Reduction	Topology, Size & Shape	Standardization
Manufacturing Processes	Surface Finish	Packaging
DOE-CAE	Heat Treatment	Attribute & Spec

Mr. Rabindra Sah
Chairman, Publications and
Corporate Branding Expert Committee, BCIC

VAVE is 7-stage systematic Framework as described below:

Data Collection:
Once goal of VAVE is finalised for sub-system or components of product to be targeted. Team works to collection Information and data from agencies like – Design, Testing, Marketing, Purchase, Quality, Benchmarking, Production Engineering, Manufacturing.

Function Identification
Function describes a product, process or service Identification & Listing of Basic & Supporting Functions. Functions: An Active Verb and a Measurable Noun. For an example, in a ball Pen: Make Mark.

FAST (Functional Analysis System Technique)
It is Diagramming technique to logically and visually display the necessary functions of a design. Higher order to Lower order functions on Critical Path. Logical questions like "Why" & "How" are asked for Critical Path & Simultaneous questions "When" to determine relations.

Function Resource Cost Matrix:
In this stage, cost wise ranking of functions are done. Ranked as highest to lowest function & prioritize based on high/low saving.

Idea Generation
Generate long list of ideas by collective thinking – Brainstorming which generates weight Alternative Design, Refine & Combine Ideas etc.

Evaluation Cost Ranking
Ranking Idea would be – High/Low Vs Prioritise with Time, based on difficulty level, Cost Saving, Implementation time. Subsequently It may lead to generate of Patent.

ROI/Business Plan
Evaluate saving /unit and Development Plan.

01 Digitalization of Lean Practices in Shop Floor

Murali Krishna Kumar
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EDS Technologies

Lean Manufacturing:

The word "lean" means no excess. So lean manufacturing can be explained simply as manufacturing which involves nominal waste. Lean manufacturing is all about reducing waste, not just physical waste, but labor and time waste caused by some processes. When all of these wastes have been eliminated from the system, only then can it be said that the system is truly lean and optimized. In short, lean manufacturing involves continual efforts to decrease or eliminate waste starting from the design process to the manufacturing, distribution and towards the product support and the phases beyond. This necessitates work and the development of a lean culture within the workforce, which ultimately leads to added value both for the customer and the company.

Managing a Lean Manufacturing Plant:

The burden to deliver quality parts on schedule and at the same time to keep throughput times, residues and missing parts to a minimum is increasing in manufacturing planning. Shop floor management helps manufacturing companies achieve this goal. Companies have multiple teams which work to achieve the required level of productivity. Below is the representation of how many teams work to produce a product.

MFG Engg. Team Provides resources for producing the product

Materials Team Proccures raw materials and provides for production

Maintenence Team Maintains the resources without any break downs

Production Team Converts raw materials into Product

Quality Team Ensures quality from raw materials till the end of product

Product

Deviating, even by any one team at any stage is not acceptable because it would affect the entire productivity of the plant.

Shop Floor Management:

Constant practice of shop floor management approaches helps to form choices, recognize deviations in productivity results and successfully solve problems. Workplace meetings are the core for creating the culture of LEAN – embedding the behavior in all operators by making it part of their work to share learnings and ideas. Also key for sustainability, part of the daily process post which managers can customize the agenda.

However, each department within the company must collect a lot of information and compile it before having the meeting. Information flow in a company for a single department is shown in the below representation.
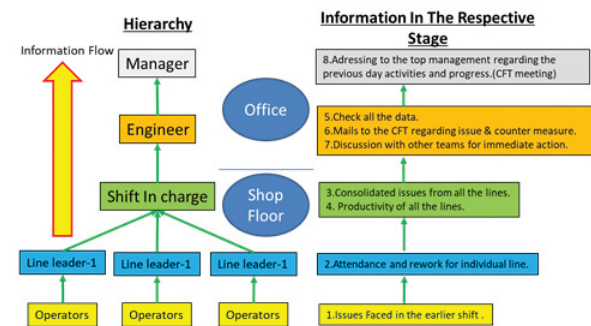
Collecting this information and compiling has to be done for easy understanding and discussion. More specifically, there are four paper practices:

(1) creating and adapting individual information spaces

(2) reinterpreting information

(3) combining information handover with social interaction

(4) visual cuing

After collecting and compiling, this information goes to the boards as shown below.

01

Challenges within the paper-based shop floor meeting:

1. Time taken for updating the boards.

2. Information transparency is missed and reviewing previous days' issues by management is very challenging.

3. No track/update of issues discussed, if they were closed or not.

4. Data retrievability could be a huge issue.

Digitalize Lean Practices:

DELMIA 3DLean is a modern, customizable and interactive solution that gives managers the ability to capture, monitor, and track operational meetings on the shop floor. It enables manufacturers to bring about lean practices to make them an integral part of shop floor operations by providing critical coordination and communication capabilities. Enacting Lean practices on the shop floor help improve communication. Built on the 3DEXPERIENCE platform, DELMIA 3DLean has a widget-based web app called HIGHLIGHTS that uses touchscreen technology to deploy Lean practices to team leaders, workers, and support teams.
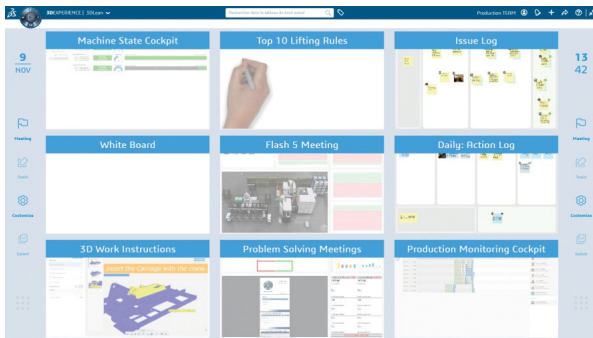
Digitalization unites shop floor data with engineers' intellect and breaks down organizational barriers and allows each team to take the correct actions, cascade results to stakeholders, and collaborate effortlessly regardless of their role or job. It helps companies by allowing teams to add human intelligence to shop floor data when addressing operational needs. It also animates Lean work place meetings with graphically presented functions for immediate action and follow through.


It also helps to track the discussed points. Each issue can be assigned in the board and status of the work can be checked and followed up with the responsible person for the details and solve the issues without any waste of time.
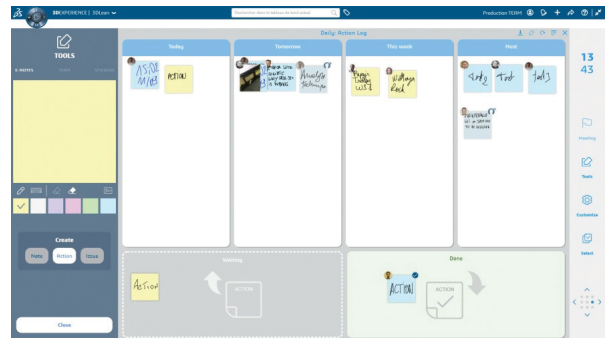
DELMIA 3DLean makes 'Lean thinking' a standard part of business, teams and culture by:

• Allowing flexibility to adapt to new team scenarios and context.

• Putting lean principles into action to handle operational waste, variability and efficiency.

Creating a Business Competitive Advantage
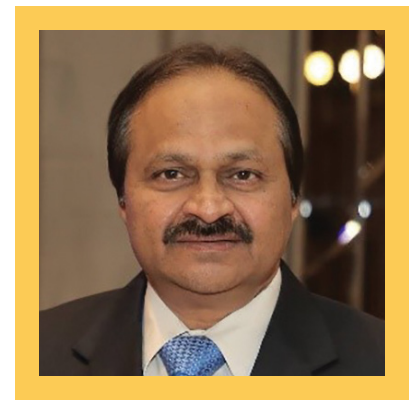
Dr. Krishna Kumar N G *Ph.D*
Business Coach, Mentor & Trainer
Business Growth Consultancy Services

Competitive Advantage is a wonderful strategy-based words coined by strategy management guru Michael Porter in the early eighties. Even today, Prof. Michael Porter is referred to, when it comes to the subject of strategy management. The concept of the five forces model framework has remained as a main source for a company to analyse its competitive growth strategy. Porter's five forces analysis is a framework that helps, when starting a new business or when entering a new industry sector or even analysing your current business strategy. Competition need not be from the competitors. On the other hand, the competition in an industry could be due the five forces as promogulated by Prof. Porter, and they are: 1) Threat of new entrants, 2) Bargaining power of suppliers, 3) Bargaining power of buyers, 4) Threat of substitute products or services, and 5) Existing industry rivalry. The collective strength of these forces determines the profit potential of an industry and thus its attractiveness. If the five forces are intense, then no company in the industry earns attractive returns on the investments. If the competitive forces are mild however, there is room for higher returns.

But how to actually create a competitive advantage in your business. If there is no competitive advantage then you will not have a successful business. Under the current VUCA business environment, it is imperative and highly essential for every organisation to create a competitive advantage environment from within, so as to take on the market forces operating outside the organisation. Lets briefly analyse how an organisation can create a competitive advantage.

Develop a culture of competitiveness in the organisation

If you are a start-up then start building this culture from the day one when you start your business. Don't say that culture can be built later on and say that let's first get started with building the product / solution. This is a wrong approach. Before you are ready to actually take off you will be badly hit by the wrong culture in the organisation. If you are an already established player then have a look into your organisation's culture and check whether the spirit of competitiveness exists and if not build it soon. Culture and business need not be exclusive entities. Culture of competitiveness means developing such solutions that are customer oriented at attractive costs, which can provide leadership to the organisation in the market in which it is operating.

Develop the best talent which has the spirit of competitive advantage

Talent is one of the key elements of the organisation. Talent can be the devil or the deliverer. Talent can provide a behavioural advantage. It is the behaviour that plays an important role in understanding the market, in knowing the customer's requirements and providing the right solutions. Can you attract, retain and develop such a talent which is happy working with you and can share that happiness with customers that the organisation is serving? This the talent competitive advantage which you should grow.

Find out the DNA of your right customer

Customer is an important aspect of the business. Getting and retaining the right customer for the business is equally more important. Few of the businesses are lucky to get the right customers. Not all get this luck. Right customers pay you right for your products and services, they motivate you to grow with them, advise you on new products and services launch. The DNA should match. Spend a good quality time in searching the right customer. Convert the customers on hand to become the right customers. Don't allow the right customer to be hijacked by your competitor. Right customer is often the key to the competitive advantage.

Develop a Unique Value Proposition of your organisation

Most often among the average organisations' prices, quality, delivery terms, features, customer relationships etc are more or less same. There's nothing much to differentiate. The customer will purchase based convenience and will be done with it. Simple. But you have few organisations who are clocking better sales, getting better margins and growing faster than the average organisations. It is that unique value proposition that they have developed which attracts the right customers more and more. They develop that unique behavioural advantage through the organisation. The people are motivated, they know what decisions they can take, they are totally customer oriented and each action of them benefits the organisation.

Develop the winning strategy

Wondering what this is? An organisation with competitive advantage will have a winning strategy. The winning strategy is made of organisational capability and competence, product / service superiority, speed of delivery, cost competitiveness and the X factor being people behaviour with customer orientation. An organisation with the winning strategy will have innovation in its DNA. This cannot be built overnight. The management should consciously work towards building this.

If you consider those organisations, which were doing very well some fifty years back, and reflect about their current status, then almost 80% of those fortune big companies are either extinct or transformed into different businesses. They would have lost their advantages of those days to the nimble innovative organisations of 21st century. Lots of changes have happened one of them being, the economic behaviour of the customers and changing competitive environment. Understanding this is important for the growth of an organisation. Therefore, organisations should constantly work towards developing that competitive advantage to survive and remain relevant.

03 Enterprise Resource Planning at a glance

Ranjna Sah
Project Manager
Digital Enterprise Solution
Tata Technologies

The core Business Processes of any company comprises of Finance, Materials Management, Supply Chain, Procurement, Payment, Sales, Services, Manufacturing, Management of Assets and Human Resources. There is always a need to have a fully integrated system to efficiently manage all these processes centrally. And here the ERP comes into the picture.

ERP Which stands for Enterprise Resource Planning can be better described as a "Central Nervous System" of any Company. Not only it provides the Automation, Integration, and Intelligence that is essential to efficiently run all day-to-day business operation, but keeping data in ERP System provides a single source of truth across the business. The same data can be used in a very controlled fashion.

It's a myth that ERP is needed only for Big Enterprises only. Starting from Startup to Small Business, Mid sized, SME and Big Enterprise all can get benefited from ERP System implementation.

Following benefits can be realised for all size of the company after implementing ERP

- Better Control – You can put better control on the system as all the data as well as the processes are integrated. The particular transactions can be done only by the person who is authorised to do it.

- Higher Productivity and hence can deliver more Products on time : As the Business Processes are aligned , integrated and automated , work done will be faster with fewer resources.

- Reduce inventory Cost – As the information related to Forecast, Sales, Procurement and production is available real time, inventory cost can be reduced.

- Faster and accurate accounting - it can automate, simplify and evaluate most accounting processes. What can take employees days to analyse and compute can be achieved within minutes using an ERP solution.

- Fast decision taking: Information/Data a single source of truth, you can get fast answers to mission-critical business decisions

- Accelerated Reporting: As the processes are integrated, all the reporting requirements will be available in a blink of eyes.

- Minimized risk: Maximize business visibility and control, ensure compliance with regulatory requirements and hence predict and prevent risk.

- Smart Cash flow – Sourcing, tracking and managing orders can be organized to reduce inventory cost and enabling smart purchasing and sales.

- Improved agility: With efficient operations and ready access to real-time data, you can quickly identify and react to new opportunities. Your sales department can more effectively interact with prospects and customers, as well as make faster and more accurate quotes and estimates.

- Enhanced Customer Service: System customer satisfaction rates and other client-based KPIs so you can know what's working, what needs improvement and what isn't successful.

ERP can be used for any kind of industries - be it Retail, Manufacturing, Distribution, Services , Construction, Healthcare, Hospitality, Education. These all are integrated in a single system.

The modular design of ERP provides data and supports the processes that help employees manage their daily tasks. Each module is integrated into the system to ensure a single source of accurate data in the organization.

Based on type and the size of industry, you will have to choose the best suited ERP System and also you can customize the modules. For example, There is no need to add Manufacturing module if your business is related to Retail. There are many ERP systems are currently in market – you will have to select the one which is best suited for your industry and size.

As we all know, we are currently in the era of digital transformation – modern ERP is also not behind. They are continuously upgrading themselves to add new intelligent technologies such as AI, ML RPA, IoT, NLP and in-memory databases to ultimately remain competitive in a time of unprecedented change.

Now come to the deployment part - Modern ERP systems can be deployed in a number of ways: in a public or private cloud, on premises, or in various hybrid scenarios that combine environments. You need to decide and choose which one is best cost effective, feasible and suited for your business.

With the effective use of ERP System, ROI can be realised in a short span of time.

04 Industry, Institute, Human Capital, and the India Vision-2030

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Abstract

The article discusses the importance of human capital development in achieving India's Vision 2030, which aims to transform India into a $10 trillion economy and become a global superpower. It highlights the need for educational institutions to collaborate with the industry to provide practical experience to students and promote research and innovation. The article concludes by discussing some of the ways the industry can engage with educational institutions to develop the necessary skills and create a supportive ecosystem for startups to thrive

Vision 2030 is an ambitious plan to transform India into a US$ 10 Tn economy and a global superpower by focusing on various key areas, including human capital development. The term "human capital" refers to the knowledge, skills, and abilities possessed by individuals that contribute to their productivity and potential. In the context of Vision 2030, human capital development aims to create a highly skilled and educated workforce that can drive economic growth and innovation in India.

To achieve this goal, India needs to focus on improving the quality of education and providing access to education to all sections of society. The National Education Policy 2020 is a significant step towards achieving this objective by promoting research and development activities and encouraging educational institutions to collaborate with the industry. It also aims to provide equal access to education and bridge the gap between skill development and employability..

According to the All-India Survey on Higher Education (AISHE) 2020-21, India has 1,113 universities and over 43,796 colleges, with over 41.4 million students enrolled in higher education. However, India ranks low in terms of research and innovation. The World Intellectual Property Organization (WIPO) ranked India 40th in the Global Innovation Index 2022, below other emerging economies like China, Hungary, and Malaysia.

Employability from 2017–2023

2017	2018	2019	2020	2021	2022	2023
40.44%	45.60%	47.38%	46.21%	45.9%	46.2%	50.3%
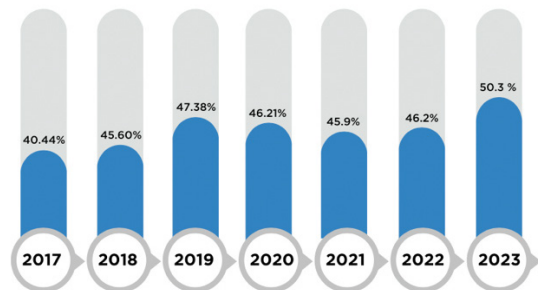
Source: India Skills Report 2023

While the number of higher educational institutions is increasing every year, employability of the students graduating from them has consistently been a point of concern. According to the India Skills Report 2023 by Wheebox, only 57.44% of engineering graduates in India are employable in core engineering roles, while the overall young employability is at 50.3%. This highlights the need for educational institutions to provide practical experience to students. It is only by working with the industry that the educational institutions can provide students with real-world problems and opportunities for research and innovation.

The National Education Policy 2020 (NEP 2020) tries to address this issue by emphasizing the importance of research and innovation. It encourages educational institutions to collaborate with the industry to promote research and development activities. The policy envisions the establishment of research parks, innovation hubs, and incubation centers, which can provide opportunities for the industry and academia to work together on research projects.

Source: Times of India

Another essential aspect of human capital development is promoting entrepreneurship and start-up culture. The government has launched various initiatives such as the Startup India Program and Atal Innovation Mission to create a supportive ecosystem for start-ups to thrive. By encouraging entrepreneurship, India can create more jobs and foster innovation, contributing to economic growth.

Finally, investing in skill development is crucial for developing human capital. Industries can play a vital role in this by engaging with the educational institutions on one or more of the following options:

1. Provide internship and apprenticeship opportunities: Industries can offer internships and apprenticeships to students, which can help them gain practical experience and skills that are highly valued by employers.

2. Be on the advisory boards: Industries can collaborate with educational institutions to develop relevant curriculum and plan necessary interventions in the form of extra-curricular activities to enhances the employability. This can help ensure that students are learning skills that are in demand by employers.

3. Offer mentorship and career guidance: Industries can provide mentorship and career guidance to students, helping them understand the job market and develop the skills they need to succeed.

4. Skill development: Industries can invest in the skill development of students by sponsoring events like hackathons, offering training programs, certifications, and professional development opportunities. Industry can also plan knowledge sharing sessions, on-the-job training programs etc for the faculty members.

5. Collaborate on research: Industries can share their problem statements with the educational institutions to undertake research activities. While this can act as a channel to find solutions without expending the inhouse resources, it provides the students and faculties with a lucrative opportunity to understand the challenges faced by the industry. It also helps in fostering the creativity and innovation skills in both the students and faculties.

To summarize, the industry-institute partnership is critical to realizing India Vision 2030, and the National Education Policy 2020 is a progressive move towards promoting this partnership. The policy emphasizes the importance of research and innovation, promotes entrepreneurship and startup culture, and encourages educational institutions to collaborate with the industry. By working together, the industry and academia can create an enabling environment for startups, bridge the gap between theory and practice, and promote innovation and development. India has the potential to emerge as a global superpower, and with the active collaboration of the industry and academia, it can turn this potential into reality.

Down Memory Lane

Mr T Subbarao

BCIC President: 1979-1980

One of the Founding Fathers of the Chamber. Mr. T Subbarao was a legal eagle who straddled the world of Legal Practice and Corporate Affairs.

Coming from an agrarian village in West Godavari District, Andhra Pradesh, he obtained his graduate degree and gave up the job to pursue higher studies and look a degree in Law and later received his Master's degree from the University of Lucknow.

After his academic journey, Mr. Subbarao sailed through the Public Services Competitive Examination and joined the Central Income Tax Department as a Tax Officer and remained there for ten years before charting out on a professional legal career.

He joined the services of On Dignam & Co. an outstanding legal firm of Solicitors and Advocates, Calcutta He was then deputed to head King & Partridge, Bangalore as a Partner.

As Senior Partner with King & Partridge, Mr Subbarao soon rose to become a legal heavyweight and in his forty years of Chamber practice, he set the tone and tenor in the areas of Corporate Tax and Tax Laws.

Reputed Indian corporate companies and large multinationals sought his advice on entry and exit routes, doing business in India and entering into collaborations and joint ventures both domestically and overseas.

His legal acumen greatly facilitated in wading through complex corporate and tax litigation. His advice on corporate governance models was highly respected

Mr. Subbarao served on the Board of many eminent companies including Motor Industries Company Limited (MICO), J L. Morrison, Bhorukas and John Fowler.

As a Trustee and Charman for many years, his contribution to the growth and development of Nettur Technical Training Foundation (NTTF) as the premier Vocational Training Institute in India has been phenomenal.

Mr. Subbarao was a great patron of Music and Arts.

During his Tenure, Mr. Subbarao continued with the dialogue that the previous Presidents had initiated with the State Government and its various administrative wings.

The Power and the Labour issues continued to strangle the growth of the State Industry. During his Presidency the Chamber called for power cuts steps for augmenting power supply, financial assistance to companies affected by power cuts allocation of oil for captive power generation.

The Chamber at the request of the Commonwealth Secretariat received an eighteen-member delegation on a three-day visit. They were memberof the Commonwealth interchange Study Group Operation (CISGO) established by the Royal Commonwealth Society. London to promote greater understanding among the people of Commonwealth.

The unique feature of the program is that it provides young people of promise and ability with an opportunity to make a broad study of other members of the Commonwealth.

Mr. Subbarao piloted the committee of Company Affairs as its Chairman for a number of years During his Chairmanship a host of Aide Memories and plethora of memoranda were submitted to the State and Central Governments on Taxation, Company Law MRTP, Corporate Governance, Electricity and Power, Infrastructure and issues of governance.

Mr. Subbarao was a sharp and incisive critic of the infirmities in specific legislation and policy pronouncements and directly took head-on the Government departments and Agencies with his deep analysis and forensic skills His supreme abilities in presenting the case on behalf of Industry and business earned the Chamber an influential position in modulating government policies both at the State and Central levels.

Mr. T Subba Rao, President, GMCI with Dr. Manhohan Singh, Finance Minister, GoI; Also seen Mr. N L Hamirwasia
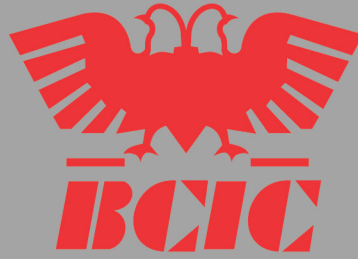
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