



Bangalore Chamber of Industry and Commerce

-Synergy

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MISSION

Namma Karnataka-
Gateway to Future India

VISION

Look Beyond

Together We Should



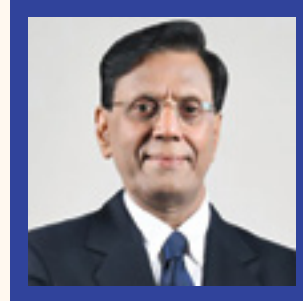
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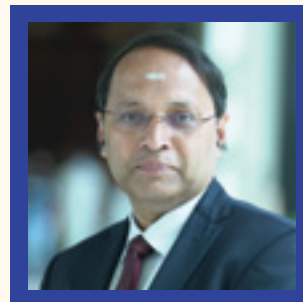
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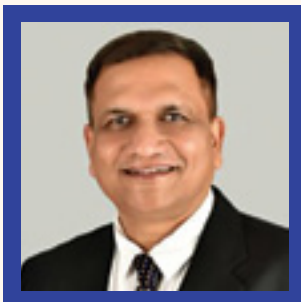
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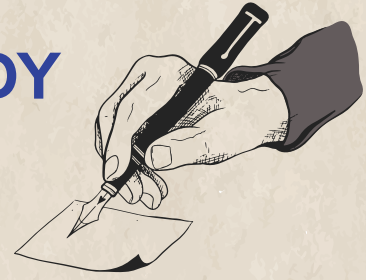
Mr. Raju Bhatnagar
Partner
ITI Consultants



Building a **FUTURE-READY** organization

Dr. Anant R Koppar

CEO & Managing Director
Kushagramati Analytics Private Limited



Dear Members,

Greetings!

In this new world order, every activity, be it personal or business needs to be done remotely without face-to-face meetings or discussions. The digital transformation age started with the success of many e-commerce initiatives in the early 2000 but now it has become imperative that every business has to change the way they functioned. Digital transformation is the integration of digital technology into all areas of a business, fundamentally changing how businesses and governments operate and deliver value to customers.

India is one of the largest and fastest-growing digital consumers' markets. With digital capabilities improving and connectivity becoming omnipresent, technology is poised to radically change almost every sector of India's economy. There is a demand for better customer experience, and people expect governments / businesses to keep up and improve the standards.

Businesses and Governments that innovate and digitize rapidly will be better placed to take advantage of India's large, connected market and increase their productivity and profitability. The focus needs to be on newly digitizing sectors such as Pharma, Healthcare, Logistics and Retail, which are not traditionally considered a part of India's digital economy but have the potential to rapidly adopt new technologies.

If digitization was competitive advantage for organizations in the past, it is today an inevitable aspect of survival in the industry. In recent times we have witnessed the world changing drastically with digital transformation at the forefront of corporate agendas. As a result, businesses face huge hurdles as data becomes increasingly diversified, scattered and dense. Organizations in all sectors are adopting transformation strategies to improve profit through enhanced data collection, stronger resource management, data driven customer insights, better connectivity, predictive analysis and much more. The production of machine-generated data augmented by existing systems, social media and from in house applications has resulted in creation of massive amount of data across the board, all of which has led to organization's incomprehensible issue. These organizations need to gain improved business insights from various types of data collected within their organization.

When selecting a team for digital transformation, the team needs to ensure to deliver increased insights that bring value to data in a secure environment. Availability of rich pool of solutions and services is the key for improved productivity, performance and customer experience.

The following aspects should be addressed while building a team for digital transformation:

- Deep expertise in Data Analytics, Cloud computing, Artificial Intelligence and Machine Learning
- Strong combination of Industry knowledge, Technical skills and Project Management expertise
- Highly differentiated methodology to modernize applications and accelerate transition to cloud
- Expertise focused on delivering measurable and quantifiable business value
- In conclusion, Building a Future Ready Organization is a challenge that has to be addressed by the top executives.





Raju Bhatnagar

Partner
ITI Consultants

Digitisation is upending business models. It has “graduated” from being a buzzword in Corporate Boardrooms to being implemented as a strategic initiative and now being demand-driven, is becoming ubiquitous impacting all walks of life.

It is said that a picture speaks a thousand words: Alongside is a picture of a beggar at Madhya Pradesh’s Chhindwara district seeking alms using a QR code. He says that he is no longer chased away because people don’t have change. It is quite likely that his “daily collections” have “improved” !!

A few years ago, it was inconceivable that the such a wide swathe of the population would be impacted.

As a data point, there are nearly 5 crores interoperable QR codes operational in India.

An indicator is the explosive growth of the UPI platform, since its launch in April 2016. In October 2022, 365 banks were offering this service to their customers. Monthly volumes for October 2022 were an astonishing 730 crores comprising a value of Rs. 12.11 lakh crores.

And this is only the tip of the iceberg.

While individual companies are scaling up and accelerating their efforts on Digital Transformation, some of the recent initiatives announced by the Government have the capacity to exponentially impact multiple sectors. A couple of examples are:

- The recently announced National Logistics Policy (Ref e-Synergy, Vol 2, October 2022) is underpinned digitally, with an aim of reducing the cost of

logistics from 14% to less than 10% in India’s highly fragmented Logistics sector in the first phase;

- Similarly, ONDC (Open Network for Digital Commerce) aims at promoting open networks for all aspects of exchange of goods and services over digital or electronic networks. It is targeted at making e-Commerce more inclusive and accessible for consumers, who can, potentially, “discover” any seller, product or service, thus increasing freedom of choice for consumers. It has been touted as the “UPI for e-Commerce” and is likely to have a similar impact.
- More details of Digital India initiatives can be accessed on <https://digitalindia.gov.in/di-initiatives>

Digitisation, in India, is already centre stage and promises to become all pervading, leaving no sector untouched.





Journey and Success Story of AMTDC – IIT Madras

Prof. N. Ramesh Babu

V Balaraman Institute Chair Professor, Dept. of Mechanical Engineering IIT Madras
Secretary, Advanced Manufacturing Technology Development Centre AMTDC, IIT Madras

AMTDC is one of its kind in India, bringing the concept of Government-Industry-Academia collaboration into reality, to offer Translational Research Solutions for developing Advanced Technologies in Capital Goods Manufacturing Sector with the collaboration of industrial partners.

Advanced Manufacturing Technology Development Centre - AMTDC is a Centre of Excellence on Machine Tools and Production Technology supported by the Ministry of Heavy Industry - MHI, Government of India in collaboration with Indian Machine Tools Manufacturers Association - IMTMA under the scheme "Enhancement of Competitiveness in Indian Capital Goods Sector" and IIT Madras in 2016.

The synergy created by the troika of government-academia-industry had long been known to create an ecosystem for relentless innovation. Many developed countries like USA, Germany, UK, Japan had leveraged this collaborative model to remain at the top of the technology chain.

AMTDC is one of its kind in India, bringing the concept of Industry-Academia collaboration into reality, to offer Translational Research Solutions (Level 1 to 9) for developing Advanced Technologies in Capital Goods Manufacturing Sector with the collaboration of industrial partners.

AMTDC's vision is to serve as a synergistic institution for transformational research that combines the expertise of eminent faculty, industry experts, researchers, engineers and enthusiastic students to innovate commercially viable solutions / technologies / product for capital goods manufacturing sector in India. The three main missions of the centre are

- To create Technologies that are commercially viable for use in capital goods manufacturing sector
- High quality human resources for manufacturing sector
- Opportunities for incubation of new technologies and promote business development for MSME/SMEs

The centre focuses on indigenous product development in the areas such as

- Mother Machine Tools and Machining Technologies including High Precision Production Machines and Sophisticated Machines
- Smart and Digital Manufacturing which include the development of soft and hard solutions for manufacturing process intelligence, IIoT-based improvement of machine performance, and
- Robotics and automation systems.

Over the past five years, the centre has developed first time technologies such as

- Automation of Grinding Process Intelligence
 - Thermal Compensation Strategy for CNC Lathes
- #### and Import substitutes such as
- Hydrostatic slideways and Spindle systems for machine tools
 - 5-axis Multi-tasking Machine (a turn-mill variant)
 - 5-axis Universal Machining Centre with rotary hydrostatic table
 - 5-axis Micromachining Centre
 - 6-axis articulated robots – 5 robots (6 – 25 kgs payloads)
 - Automation systems for metallographic specimen preparation
 - Electric drives for machine tools
 - MSME solutions such as Orbital and Direct Drive Abrasive Cutting Machines
 - 3D additive printers for metal and reinforced concrete.

In addition, AMTDC is partnering with organizations in developing turn-key solutions for projects of national importance and causes.

AMTDC is in collaboration with National High Speed Railway Corporation Limited (NHSRCL) to develop a simulation software for studying the interaction of pantograph and overhead catenary system.

AMTDC is developing an automated manufacturing and assembly line for hydrogen fuel cell development for Centre for Fuel Cell Technology (CFCT) under International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad.



Hydrostatic Systems for precision machine tool



Success of the Centre:

The Centre has also generated 10+ joint patents and copyrights along with its industry partners for development of innovative technologies to the state of art.

The achievements include 10+ Govt. funded Projects in Phase I, Ongoing Phase II Projects, 15+ Direct Industry Projects, 20+ Technical Support to Start-ups/ SMEs/ MSMEs/ OEMs.

For further info: <https://amtdc.org/>

Ongoing and Upcoming Activities at AMTDC:

Knowledge Integration for Technology Enrichment – KITE a Technology Innovation Platform:

kite is a Technology Innovation Platform Platforms launched by MHI, GoI for development of technologies for globally competitive manufacturing in India created by AMTDC-IIT Madras for the enrichment of Manufacturing Innovation, Product Development and Skill Development and to connect various stakeholders in manufacturing domain: industry to academia, students to professors, engineers to managers, entrepreneurs to investors for

- Make in India with Joint / Collaborative ventures with MNCs
- Made in India with enhanced capability of Indian Industries

Further, it will facilitate exchange of knowledge with respect to research & development and other technological aspects. Over 39000 Students, Experts, Institutes, Industries and labs have already registered on these platforms.

Register at <https://kite.iitm.ac.in/register/>

Smart Manufacturing and Digital Transformation Centre - SMTDC:

AMTDC, MESA International and Cantier Systems have entered into a strategic partnership to launch smart manufacturing and digital transformation centre to undergo incredible digital transformations leveraging an upswing in market conditions and global rebalancing of supply chains.

Industry Accelerator:

AMTDC is leading forefront in Indigenous Development of Industrial Robots of 4-200 kgs Payload which can be used for varied applications including development, integration of aggregates with coordination of 10+ aggregate developers and end users.



6kg and 10kg payload robots



Precise 5 axis Multi-Tasking Machine (2 ATCs with capacity of 120 different tools)



Paradigm Shift in Manufacturing

G. Prakash

Vice President – Technical,
Toyota Kirloskar Auto Parts Pvt. Ltd.



A paradigm shift is a major change in how people think and get things done that upends and replaces a prior paradigm. A paradigm shift can result after the accumulation of anomalies or evidence that challenges the status quo, or due to some revolutionary innovation or discovery.

Accordingly, a paradigm shift is defined as “an important change that happens when the usual way of thinking about or doing something is replaced by a new and different way.”

Primarily Manufacturing has been in the forefront of economic growth owing to its fundamental goal of achieving Men material and welfare (MMW). Looking at the growth of most developed countries from east to west, manufacturing is leading the revolution towards enhancing welfare of human beings and society and ecosystem at large.

With Industry 4.0 taking lead in all facets of business and more so in manufacturing, the 4M 1E of manufacturing have been impacted and are in currently in transition phase.

Machines:

There is greater shift from conventional machines and equipment towards more cyber physical IOT systems (IT (information technology) +OT (Operation technology) = IOT). Owing to tremendous improvement in computing power, data storage and chip technology and microelectronics, sensors are playing major role in driving paradigm shift in manufacturing. Combination of microelectronics, sensors and computing power has enhanced the speed of machines there by increasing the productivity, faster response to customer demand both in terms of speed, scale, and variety. Robots, COBOTS and flexible automation are gaining momentum.

Materials:

The 19th and 20th Century manufacturing predominantly used metal and non-metal such as Steel, cast iron, alloys of steel, copper, bronze, and alloys of these primary materials. With the advent of new manufacturing techniques and capabilities such as Additive manufacturing the conventional materials are being replaced by composites and alloys of varying chemical composition to meet specific needs of the products and functions. Earlier considered materials were limited by manufacturing or machining limitation is no longer valid. An excellent example is the application of additive manufacturing in biomedical products such as Hip joints, hearing aids which not only are cost effective but also more customized to suit the needs and comforts of everyone.

Nano materials with nano technology has further boosted the possibility of material efficiency and harmony with nature.

PLM (product life cycle management) is most fundamental to sustainable manufacturing with focus on 3R (recycle, reduce and reuse) right from the product planning and designing phase. Global warming has awakened all the nations towards protecting the mother earth from

Greenhouse gas emissions thus shifting the focus not just from manufacturing but towards Carbon footprint in manufacturing, supply chain, logistics and entire product life cycle management. With focus on sustainable products, circular manufacturing, the mobility industry (Air, water, and land) is shifting towards electrification.

Man:

To further support the paradigm shift in machines and materials, there is a greater shift taking place in skills and knowledge of workforce in manufacturing. Every employee is gearing up to meet the challenges of paradigm shift in manufacturing technology through upskilling and reskilling. Gone are the days where there was segmentation between various knowledge vertical such as mechanical, electrical, electronics and computer engineering streams. All most every field of manufacturing now requires skill sets of combination of basic and advanced engineering fields. robotics and automation are an excellent example which needs skill sets of mechanical, electrical, electronics. This has also given birth to various new branches of engineering such as Mechatronics, Biomedical electronics, biotechnology, MEMS, high precision machining. Workers no longer are used for routine work rather are being trained in applying their innovative skills and knowledge. Routine work is replaced by robots and automation.

With ecosystem of HRD fast evolving aligning to paradigm shift in manufacturing, various educational and technical institutions are collaborating with industry to jointly develop and innovate new products and services. Use of AR (Augmented reality), VR (virtual reality) and MR (Mixed reality) have further enhanced the speed of learning and upskilling human resources.

Method:

Manufacturing methods have gradually shifting towards make to stock to make to order through various revolutionary manufacturing philosophy such as Lean, TOC, TQM, TPM with primary focus on smooth flow of materials across its supply chain.

IOT, industry 4.0 and other technologies are integrated to manufacturing methods towards reduction in lead time, cost and Improve quality and customer satisfaction.

Environment:

Manufacturing environment is shifting towards more user friendly with “Employees first and Customer must” theme in most organization. The application of Occupational Safety and Health Management Systems (OSHMS) based on relevant OSH criteria and ISO45001 are gaining importance driving every organization to care for employees in particular and Society in general.

Summary: The above factors of 4M and 1E are indicative of transformation and paradigm shift in manufacturing and the pace of the change will further accelerate towards more collaborative efforts towards economic prosperity and growth.



Indian Economy: Why This Is India's Decade

Mr. Sudeep Srikantaswamy

Director -Wealth Management & Family Office,
Bangalore

India to become world's third largest economy &
world's third largest stock market by 2027



India's GDP is set to double from the current \$3.4 trillion to \$8.5 trillion over the next decade.

India will add more than \$400 bn to its GDP every year, a scale that is only surpassed by the US and China.

- Morgan Stanley

Morgan Stanley projected that by 2032, India's market capitalization will go up from USD 3.4 trillion to USD 11 trillion by 2032

- the third biggest.

Four key factors - demographics, digitalization, decarbonization and deglobalization - are likely to facilitate India's rapid rise.

Morgan Stanley forecasts India's rise in coming decade

Trends and policies driving the future of the country's economy:

- India's Global export market share is expected to more than double at 4.5% by 2031, providing an incremental USD 1.2 trillion export opportunity.
- Services exports will almost treble to USD 527 bn (from USD 178 bn in 2021) over the next decade.
- E-commerce penetration to nearly double from 6.5% to 12.3% by 2031.
- Internet users in India to increase from 650 million to 960 million while online shoppers will grow from 250 million to 700 million over the next 10 years.
- India's workforce in the technology services sector to more than double from 5.1 million in 2021 to 12.2 million in 2031.
- Healthcare penetration in India can rise from 30-40 per cent now to 60-70 per cent; implying 400 million new entrants to the formal healthcare system.
- Over USD 700 billion in Energy investments are expected over the next decade as India accelerates its energy transition

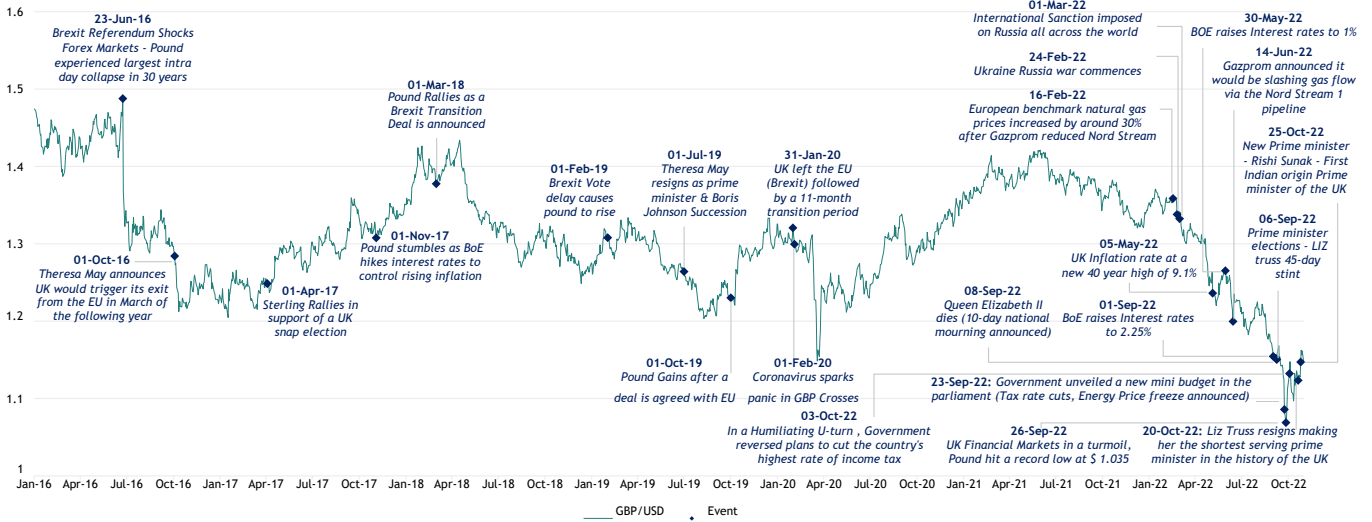
Source: Morgan Stanley report



UK Economy in Charts

Key Events

UK British Pound: An Event Timeline



Following a downtrend that lasted several months, the British pound (GBP) has risen 11% against the \$ since hitting a record low of \$1.03 in September, although it remains down close to 15% since the start of the year. With UK inflation elevated and still rising, the cost-of-living crisis taking hold, growth slowing, and debt markets in disarray following the latest budget, the outlook for the pound continues to remain bearish. Meanwhile, the USD is supported by safe-haven flows and hawkish US Federal Reserve bets

Source: o3 Research, Bloomberg

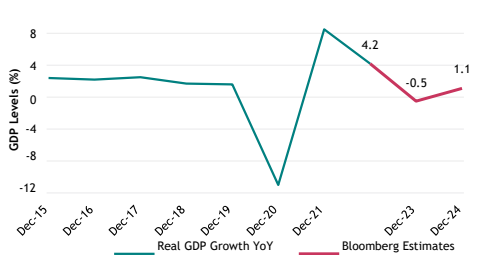


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UK Economy: Macro Forecasts

New forecast warns UK is facing the potential of a recession for the next three quarters but says the risk of a severe downturn has been reduced by the government's intervention on energy bills.

Real GDP Growth YoY (%)

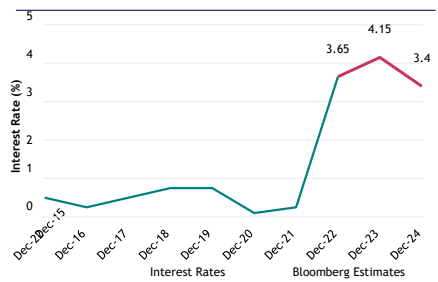


- The decision by Jeremy Hunt, the new UK finance minister, to jettison the bulk of Prime Minister Liz Truss' much-maligned plans to boost growth has come as a huge relief to investors, easing their worries about the sustainability of government finances.
- A recession stretching through the winter looms. Policymakers were facing tough choices even before Truss unleashed financial market chaos. Now, with the government's credibility tarnished, they're in an even worse predicament.

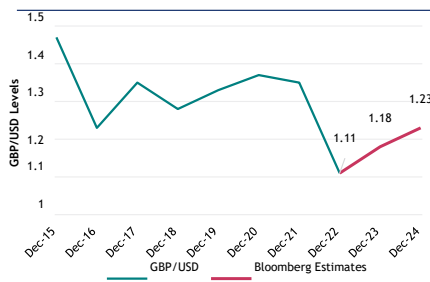
Retail Price Index YoY (%)



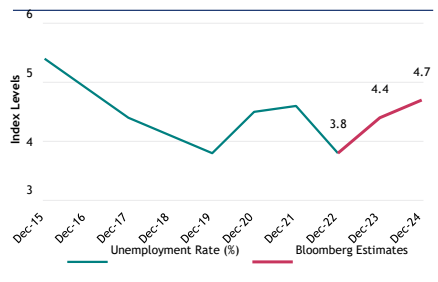
BoE Interest Rate YoY



FX: GBP/USD YoY



Unemployment Rate YoY (%)



Source: o3 Research, Bloomberg



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Scaling-up SME Businesses Successfully - A 4-Step Approach That Works!

P K Narayanan

CEO Coach, Bengaluru.

Scale-up is a possibility for every SME business. The Scale-up happens when we have a winning strategy and excellence in execution - this 4-step approach works!

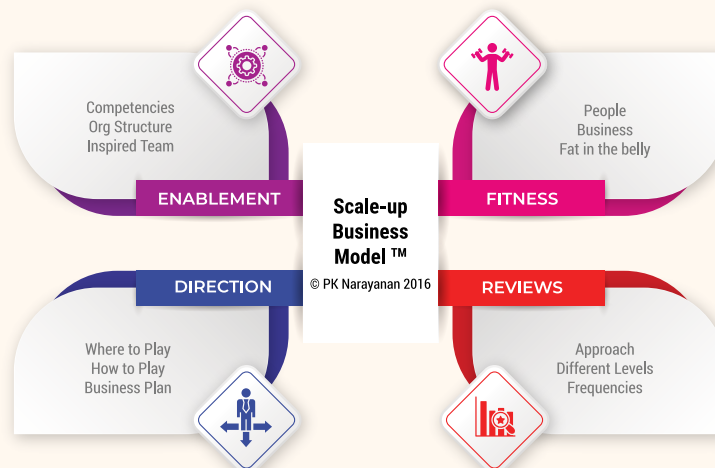
Scaling-up the business is a dream of every Entrepreneur and Business Owner. Yet only 4% of Business Owners are able to grow, and Scale-up their businesses successfully. The rest either survive or perish. That's pretty agonizing. Seemingly there's no lack of intent. Then, what's keeping Entrepreneurs and Business Owners from Scaling-up their Business?

Working with Entrepreneurs, Business Owners and CEOs for more than 20 years helping them Scale-up their businesses, I have seen and experienced that Scale-up is a possibility for every SME

business - if we get certain aspects right for the business. I am sharing those learnings here.

The business Scale-up happens when we have a winning strategy and excellence in execution. The Scale-up Business Model™ has evolved around this, working with various businesses of different kinds. When we execute a winning plan, we enhance our chances of success significantly, increasing our odds to succeed substantially.

The Model is versatile enough to be adapted and applied to the SME businesses, at any phase in their journey, to Scale-up from where they are.



The 4-step process to Scale-up businesses successfully are:

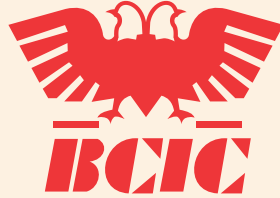
1. Setting the Direction - It's about setting the compass. It involves defining 'Where to play' - in terms of products / services, customer segment, price point, ticket size, Geography; defining 'How to play' - in terms of the differentiator, competitive advantage, answering 'why us'; and creating a cohesive Business Plan, working back from a future point-in-time (say 4-5 years), articulating the direction and key milestones.
2. Enablement - It's important to build necessary Competencies within the business, acquiring and building required Talent, creating an enabling Organisation Structure that would support the journey, and creating appropriate roles & responsibility structures providing clarity to the Team. It's extremely important to build an inspired Team to chase the purpose.
3. Reviews - Setting up appropriate Review processes and creating an operating rhythm within the business is essential for Scaling-up. These reviews and check-ins at frequent

intervals, at multiple levels across the functions are extremely important to take stock of what's happening, what needs to happen, and making necessary course corrections as required in a pro-active manner. This is a key enabler for the Business Owner and the Senior Team to focus on growth and long-term aspects of the business.

4. Fitness - Scaling-up businesses tend to accumulate fat, often in wrong places. Creating and maintaining fitness amongst the People, the roles, the plans, the systems and processes (across the functions in the business) is therefore important. Reviews also are part of ensuring Fitness across the business.

Scaling-up is a possibility for every SME business - when we execute a winning plan!

Being an SME Business Owner could be a lonely experience at the top. Therefore, the SME Business Owners could do well for themselves in their Scale-up journey by creating a strong support system around them - including that of having a Scale-up Business Coach - and building relevant leadership skills to lead the effort.



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MEDIATION CENTER: Tie-up with BIMACC, Bangalore

START-UP AND INCUBATION CENTER, MG Road, Bangalore

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