Chapter 1

Introduction to the Study

1.1 General Background

The environment all over the world, under liberalization, globalization and privatization, has created a fast changing business scenario into amazingly new dimensions. We can observe that roads are \textquoteleft linear\textquoteright but linear thinking is useless in this world as world functions in \textquoteleft non-linear\textquoteright fashion (Gibson, 2002). As per Drucker (2002), we have to slough off yesterday for creating tomorrow. Today, the critical managerial issues in the emerging scenario are free flow of information, organizational and technological dynamic change, openness/transparency that eventually culminates into tailor-made human resource development for achieving the desired goals and productivity. We have to face chaos and uncertainty prevailing over and still be comfortable in this atmosphere. We have to evolve yesterday's conventional management thought process into a new paradigm shift of \textquoteleft Flexible System Management\textquoteright. The emerging issues on the horizon and the unpredictable changing scenario requires the incorporation of flexibility and adaptability in the organizations. This demands an overall integrated approach, an effective managerial style and generation of many initiatives. The three essential attributes that may assist stimulative initiatives are: \textquoteleft A free atmosphere (openness)', \textquoteleft a supportive climate\textquoteright and a \textquoteleft loose structure\textquoteright. This may lead
towards achieving a creative/innovative and productive organizational excellence.

1.2 The Research Arena

To achieve the designed/desired productivity goal, a dynamic and 'full engagement' approach of organizational structure amalgamated/galvanized with positive and healthy work culture/environment is needed. For this, rather a 'Total Quality Management' (TQM) and 'Six Sigma' approach is required to be suitably devised. This is more so, in the 'fiercely competitive battle-field' conditions obtaining today. As we know that strategically most of the organizations can be broken down to three basic levels. The highest level, the umbrella of corporation is the 'corporate level', the second is 'business level', and the third is 'process level'. More often than not, the break through strategy applies to each level of an organization, at each level it achieves different, although complimentary results. The success of 'six-sigma'-philosophy, herein, can be defined as the extent to which it transforms each level of an organization to improve the organizational overall quality and profitability. One important point is to be understood is that although the problems of various private and public sector organizations (including government/semi-government organizations) are broadly more or less same, there are some vital ones, and need to be addressed/understood fully, keeping in mind the productivity aspect. The modern organization design also speaks about 'Project Designs' and 'Matrix Designs' which are
the alternatives to the conventional bureaucratic model. More recently, network, virtual and horizontal structures have emerged. Thus, it will be observed that flexible management approach then makes understanding of the 'change process' more dynamic and realistic.

1.2.1 Organizational Dynamics

The key factors in organizational dynamics primarily are: environmental forces, strategic choices and technological capabilities. Technological capabilities of an organization an dependent on work-flow uncertainty, task uncertainty and task interdependence which may be explained by the 'grid pattern' of types of task environment model. The organizations are made of people and main aim is to 'change'—the attitudinal change—which can be done through subordinate participation, i.e. changing the nature and quality of their working relationships. It has to be a 'planned change' brought about through the people processes in the organization. Also, organization development (OD) activity appear to have originated around 1957 as an attempt to apply some of the values and insights of laboratory trainings to total organizations. Rather Douglas Mc Gregor, is considered a pioneer in this field who talked about systematically how to complement OD programme. Although OD efforts were visible outside (Western World) in USA, UK, Japan, Norway, Sweden etc. But in Indian Scene it appeared around 1968 (Chowdhary, 2001). Also, some basic tools considered essential for OD are: organizational diagnosis, Action research, and Interventions.
The above models/concepts further guide that when situations of uncertainty or complexity obtain, differing forms of organizational design can assume more attractive features. Strategic alliances or consortium approach (alliance with other expert organizations) now a days can afford and bring in more productive throughput. Thus, there is emerging growth in a contracting environment between organizations; under such circumstances they will enter into contracts to jointly provide a product or service. This allows the organizations to expand into new markets horizon without being constrained by traditional organizational structures; within the acceptable umbrella or expanse of ‘Flexible Management Systems’ norms. This approach will have minimum negative wastage impact (Wastivity) on organizations resources; if any. In the present work, help of qualitative as well as quantitative methods have been taken together concurrently with the idea of data collection from organizations for arriving at appreciation of their efficacy and how to solve them with analytical/flexible systems models.

Charles Handy (1994) retorts “You cannot look at future as a continuation of past because the future is going to be different. And we really have to unlearn the way we dealt with the past in order to deal with the future”. As per Hammer (2000), “Formulas for yesterday’s success are almost guaranteed to be formulas for failure tomorrow”. These all boils down to, we have to be willing to challenge our own orthodoxies to regenerate strategies and rethink the most fundamental assumptions about how to
change drastically/dynamically to compete fiercely and go beyond the competitive benchmark. In this bargain of real through-put, sometime we have to abandon the present organization; do overhauling and probably turn it upside down/total upheaval, if need be.

We talk of ‘technology’ as per Drucker (2001), technology is not nature, but humanity. It is not about tools, it is about how people work. It is equally about, how they live and how they think. Rather, ‘technology is an extension of human beings.’ In simple words “technology is anything that humans make, which is very abstract.” Today in 21st century ongoing improvement has become increasingly fiercer due to ‘advancing technology’. As it can be rightly observed that what a mediocre engineer using todays’ components/technologies can produce products which are by far superior to what an exceptional engineer could produce with the components that were available ten years ago. Also, simply catching up to where others have been, is necessary to stay in the game, but the winners will be those companies/organizations who have the potential to invent/ rethink some what fundamentally new games.

It is also true that 21st century corporations are like game of football and football teams, every individual or team is focused on the objective, which involves cooperating with others while carrying out their own set of duties. And the final management buzz-word is ‘nothing to be taken for granted’ unless/until we make it happen. We have to unleash our brain-
power and unlock the inbuilt creative potential to maximum. The business landscape today is going through some important changes. We are moving away from monolithic, vertical and homogenized institutions to extremely decentralized/distributed, heterogeneous and flattened organizations. This might mean networks in other words. The organization have become global and big but may not employ as many people as an industrialized corporation would. It also, means that organizations that are bound together, not by geography, but by information—by very intense and very fast flows of information that flood through this web of distributed parts and this is the 'competitive battlefield of information technology'. In this new kind of organizations, there is an increased blurriness and an increased uncertainty about who is actually part of the corporation, and who is not. In other words, there are lots of consultants, lots of subcontractors and lots of part time people. Even at times, the customers may feel that they are part of the company. There is kind of a blurring between the customer and the employees. So there is almost a kind of biological messiness/fuzziness that we are beginning to see in the organizations.

The other concept in this millennium is rather 'change from big corporation to smaller units'. Today, it is the small companies who are creating the global economy, not only the Fortune 500. Even these days a small company can be as small as one person. Western Eye Press is a two persons company and is a global player today in Colorado. Outsourcing is
buzz word and practiced toady. The increased practicing on the principle of time and energy should be the order of the day which is the real accelerator of our life and business scenario. Trust is the foundation of all relationships. And to have more, we must be more, and this is the fundamental economic business principle and this principle of economy has to be revisited again and again. Also, we have to revisit, ‘Pareto Principle’ for this and ‘time-management’ for high productivity. This might mean-to identify ‘top 20 per cent of tasks and activities before starting and to work on those ‘vital few’ single-mindedly to achieve the results. This will itself avoid getting distracted from the bottom ‘80 per cent of tasks that contribute very little value to our life or work. This also has been suggested by management Guru Peter F. Drucker, as ‘zero-based thinking’. It says you examine every part of your business regularly to determine if there is anything that you are doing that you couldn’t get into again today if you had it to do over. This is also told as ‘KWYNK Analysis’ by Brian Tracey (2002). KWYNK stands for “Knowing What You Now Know”. Asking and answering this question of everything we do can save or gain enormously in terms of time, money and energy.

1.2.2 Strategic HR’s Role

As it is well known that HR’s role is of paramount importance for developing a dynamic and productive organization. The organizational change also warrants a strategic paradigm shift in the thought process of the human
resource. The main aim of development of human resource should be not only to 'manage' people but to 'lead' them and exploit their more productive potential and the specific strengths and knowledge for achieving the ultimate goal. There probably may be one right organization for one task and one right way to manage people—or at least there should be. It will be worth mentioning, herein, that Douglas McGregor, in his book 'Human Side of Enterprise' (1960), propagated two theories: 'Theory X and Theory Y' and asserted that 'Theory Y' is the only sound one. Later Peter F. Drucker said the same thing in his book 'The Practice of Management' (1954). A few years later Abraham H. Maslow (1908-1970) showed in his book 'Maslow on Management' that both McGregor and Drucker were dead wrong. He showed conclusively that 'Different people have to be managed differently'. Later Drucker also became follower of the overwhelming convincing theory of Maslow.

Also, as per Porter (2002): "it is not good enough just to be different. You have got to be different in ways that involve trade-offs with other ways of being different. We have to rethink globalization and, recalibrate economies". We have to 'think locally' and 'act globally' retorted by Naisbitt (2002). The main impact of globalization is that it is creating both more hazards and more opportunities for everybody. Hazards in terms of a more volatile environment and more competition. And opportunities in terms of more markets and bigger markets. This truly brings out focus on leadership:
as it is only through leadership that true development and nurturing a culture which is adaptive to change can be achieved. Today even the assumptions of ‘employees’ and ‘subordinates’ concept in an organization has become untenable. Today, the knowledge worker concept and ‘knowledge management’ is much talked about and the acumen of the top manager lies in tapping the best of skills/expertise of these knowledge workers and connect these into productive/services as per the requirement. The ‘action plan’ and process mechanism of human resource can only transform/convert input into output culminating in real throughput or productivity. And for this alongwith other traits/techniques we have to heavily bank upon, and resort to ‘flexible system management’. Strategic HR should work as a ‘force-multiplier’ in present day business scenario.

1.2.3 Organizational Behaviour

The human behaviour is a function of values, belief and faith. Not only do values create a bedrock of any corporate culture but ‘trust’, environment, nature and economic incentives have motivational and behavioural dimensions of an individual. Rather these provide a basic philosophy for achieving success, and also provide a common platform and plethora for direction/guidelines for individual’s day-to-day behaviour. Also, the group behaviour differs and that’s why organizational behaviour (OB) is essential to know as human psyche and how he works collectively in the organizations/companies. It is essential that apart form individual behaviour,
if they are working in groups have shared values, interpersonal relationship and work in a ‘mission-mode’ for desired productivity. Some of the public sector/government organizations require urgent tailor made crash projects/programmes to enhance productivity in a fixed time schedule for meeting the immediate need and total quality in a customer-focus/satisfaction mode. These guiding factors and fixed terms of references are a real challenge for organizational behavioural pattern and human resource. These also require proper technological/tailor-made trainings to impart the desired/requisite skills and knowledge for the jobs, at all levels. Also, today people are more educated/knowledgeable than yesterdays—to be handled tactfully.

A word about leadership. For 21st Century leader apart from having the leader’s traits a leader also has to continually reinvent, redesign and recompose his leadership style all the time. To have an incredible performance executive have to have extraordinary adaptability/flexibility. A leader should continue to ‘learn’—be a student all the time and should be prompt ‘decision-taker’. As per Kotter (2002), he shortly defines “management as to cope with complexity” and leadership is to cope with change. Other ingredients he has mentioned in his famous book ‘what leaders really do’. Thus, also opined by Bennis (1994) that tomorrows’ leader will have to learn how to create an environment that actually embraces change, not as a threat but as an opportunity. The major challenge for leaders in the 21st century will be how to release/unleash the
brain-power of their organizations. In this regard a SAP-LAP analysis and
experiential models have been developed in the present work for converting
the organizations into a ‘passionate organization’. The crux of effective
managers/or leaders should be to develop a social architecture that
encourages incredibly bright people, most of whom have big egos, to work
together successfully and to deploy on ground their own creativity. For doing
this, a leader must create and have a ‘shared vision with meaning’. Thus,
we observe that by creating a ‘shared sense of meaningful purpose’, the
power of an organizations, will be ‘shared sense of purpose’, and it can
achieve anything. A word of caution, lot much has been said about
leadership; ‘followership also has to be practiced and one has to decidedly
think a goal and purpose beyond oneself–organizations are greater than
individuals’. A leader has to be in ‘thinking mode’-buck stops here–he
should provide solutions.

1.2.4 Opening the Hood–21st Century

It has been observed earlier that today, a mediocre person is more
educated/knowledgeable than yesteryears and he requires careful tackling/
handling. At the same time, the technology also changing rapidly and a
leader/manager has to be ahead of the fiercely obtainable competitive
benchmark all over the world. In this emerging era of advanced technology,
the three themes emerge prominently which are different than past:
(i) The first theme is: `Road Stops Here’. This should be well understood that future will be different from the past. From here on the journey to tomorrow will be an off-road experience, and we need to change our mindset accordingly. Flexibility should be the bottom line.

(ii) The second theme is: `New Times call for New Organizations:’ What we need is a completely new kind of organizational vehicle that can handle the rough/uncertain terrain and unknown business landscape into which we are traveling. This reflects the IT-age of future and not the industrial age of past.

(iii) The third theme is: `Where do we go next?’ Faced with an unknown/uncertain journey into a confusing world, organizations are going to find it increasingly difficult to make confident strategic decisions. There are no maps of `terra incognita’–we have to travel from `known to unknown’, rather leaders will have to look ahead and explore the horizon for themselves (Gibson, 2002).

In all the above circumstances the leadership paradigm shift should be to redevise/rethink/reinvent, by unleashing the brain-power–taking an `intellectual leap’ from the linear to non-linear from known to unknown. From terra/firma to terra incognita. And also, fifth level leadership of Jim Collin’s (2001)–Humility–Management by Human Values. For tackling newer technology and changing business landscape some of the newer concepts of quality and management have been attempted as below to achieve better throughput/performance:

(i) Six-Sigma philosophy/technique
(ii) Theory of constraints technique
(iii) Rethinking Pareto–Analysis
(iv) HR Balance Scorecard (BSC) method
(v) Decision–making newer thinking
(vi) Energy management–power of full engagement
(vii) Conscious leadership model

In all the above concepts/techniques, it will be observed that training for the individuals is essential for meeting the probable date of completion (PDC) of any project/programme. Getting correct/suitable manpower on board with breakthrough strategy is the real task of the leader as well as top management. All the management gambit/practices start with ‘self-management’. The concept of ‘Six-Sigma’ is one tool, which may, help in this direction. On the job trainings, specialized trainings, network trainings, educational long-term, short-term training is, therefore, required to be planned for development of human resources and in turn learning organizations. As is well known, there is no perfect person and a perfect system, therefore a perfect or nearly perfect organization has yet to be evolved. There are no universal solutions. “Rather, the learning organizations will be fundamentally characterized by dramatic enhancements in productivity and people who feel like the work environment they are operating in is closer to what they truly value.” The theory of constraint is really a problem-solving technique. It says that “There is at least one constraint in every system–otherwise companies would be making infinite
profits/throughputs”. The key is to focus on the constraints—on strengthening the weak links in the chain—thereby improving throughput and improving profits.” And what Eli Goldratt (1990) says in his book ‘Theory of Constraints’ that he does not know of any other way to deal with problems which cannot be solved by ‘thinking process’ “systematically”. Pareto-analysis and power of full engagement—energy managements, are first to manage ‘time’ and then ‘energy’ which is more important than time. Full engagement, i.e. working passionately may only lead to success of the projects/tasks. Decision-making is the crux of a leader and top-managerial job and the Balance Score Card (BSC) technique can measure the performance of people and thus a very important and promising tool now a days in our hands. Jack Welch (2005) alongwith six sigma has utilized BSC method for achieving amazing results in GEC (General Electric Company).

Thus, we observe that in designing a new organization, one has to ask for its aim, objective, ‘purpose, environment-external/internal linkages etc. Some of the following ingredients may require full attention:

- Organizations should be in harmony with individuals’ objective and vice-versa.
- Organization which can be controlled.
- Delegation of authority as much possible.
- Shortest possible time of communication.
- Smallest possible allocation of resources to overhead activities.
- Flexibility inbuilt and inherent to cope with the ‘change’.
In the present work, some of the above ingredients of good management organizational dynamics of culture and strategic HR developmental aspects have been attempted, analyzed logically and suitably presented. Some of the Defence R&D Organizations (DRDO), herein, have been taken for case studies. These have made competitive comparison and diagnosed the inherent draw-backs/handicaps in the system. With flexible system management tools, it has been felt that such a tailor-made organization and HR practices can be formulated to give maximum throughput and productivity in the future. Some ground truths and performance measuring techniques support these results.

To summarize, we can say that winners of 21st century will be those who can transform their organizations into something that more resembles like a jeep-an all wheel drive all-terrain vehicle that is lean, mean and highly manoeuvrable. Also, winners will be those who stay ahead of the change curve, constantly redefining their industries, creating new markets, blazing new trails, re-inventing the competitive rules and challenging status quo—rather those who invent the world and not those who only respond to it. To achieve the above, probably we may require a ‘leader of leaders’. They will decentralize power and democratize strategy and involving a rich mixture of different people from inside and outside the organization in the process of inventing the future. Rethinking the future is a never-ending process-
tomorrow will always be a moving/fleeting target—which means we have to start all over again.

While studying the case studies, of various DRDO organizations, help of questionnaires and interviews has been resorted to for arriving at findings and problems or handicaps with the establishments. This has given clue for solving the existing problems or constraints. Practically in the present work some performance feedback received from scientists have also been included as a measure of validation. In the present study even some lead personalities, like Jack Welch, Robert Kaplan have been interviewed interacted and opinion incorporated for improving work culture of an organization. It has been observed generally, that the public sector type Government Organizations may not run effectively on autocratic type of styles. Here in, participative type of leadership seems to be more suitable. And the principle of full-engagement, i.e. working passionately may provide some solutions to our problems.

1.3 Objective of the Study

The study is aimed to critically examine the nature of flexibility adopted by Defence R&D Organizations at different levels—such as human resource practices and organizational structure and processes, so as to relate systemic flexibility in management and other related approaches of organizational excellence with higher success of productivity under the present changing business scenario.
1.4 Issues Covered

In the present study even some lead personalities, like Jack Welch, Robert Kaplan, Philip Bowers etc. have been interviewed and opinion incorporated for improving work culture of an organization.

Some of the broad issues taken up in this study are:

(i) Identification of flexibility needs and ways of creating flexibility in management systematically.

(ii) Ingredients of good organizational dynamics/culture to be studied and successful R&D flexibility in management to be covered.

(iii) HR developmental aspects to be critically examined, training norms and performance appraisal evaluated for better productivity of the organization.

(iv) Identification of drawbacks in few organizational case studies for its structure/culture and human resource angle.

(v) Flexibility in HR practices enhances the motivations and commitment of scientists in a dynamic environment.

(vi) Study of managerial effectiveness and R&D productivity increase with HR and organizational flexibility.

(vii) Systemic flexibility study vis-à-vis coping with organizational conflicts in R&D scenario.

(viii) For evaluation of organizational excellence apart from flexibility norms, other principles and propositions have been included. These are: Pareto Law, Six Sigma, Theory of Constraints, Power of Full Engagement, Continuity and HR Balance Score Card (BSC).

(ix) Appreciating such other problems and suggesting a dynamic organizational structure/culture and a successful productive HR developmental practice-culminating in a study model.
1.5. Scope of the Study

The scope of the study is restricted to the Defence R&D organizations in Indian context. The following parameters are taken up for study:

(i) **Appreciations of Internal and External Flexibility**: The study examines internal and external flexibility in R&D labs and their balance. The external flexibility relates to R&D Labs and the internal flexibility will relate to the scientists and other human resources.

(ii) **Criteria of Polar Opposite Traits**: The study critically examines select management paradoxes in terms of interplay of polar opposite traits in R&D Labs such as centralization and decentralization etc.

(iii) **Handling of Unknown Variables in Organizations**: This study really bring out the ways of dealing with fuzziness of the reality adopted by different organizations.

(iv) **Interplay of Order, Chaos, Conflict and Team Building Aspects**: This study helps examine how the R&D Labs are able to handle chaotic situations to generate new organic order.

(v) **Awareness about Role of Flexibility in Management**: Appreciation of the level of awareness in R&D labs about the contemporary developments in management and the role of flexibility in management assessing their flexibility needs.

(vi) **Interaction of Situation Actor Process–Learning, Actions, Performance (SAP-LAP)**: The three major elements of flexible systems management, i.e. situation, actor and process and their interaction is examined with learning, action and performance to evolve a new functional model for managing R&D organizational set up.
1.6 Methodology of the Study

The research methodology encompasses the following aspects in an interactive and integrative manner to carry out the study:

(i) Appreciation of existing handicaps and problems of the R&D labs in general/particular.
(ii) Detailed questionnaire surveys to obtain primary, data from managers/scientists in various R&D labs—large, medium and small set ups.
(iii) Development of cases of a few successful and failure R&D labs capturing flexibility aspects and other allied parameters.
(iv) Interviews with top management to synthesize their creative thinking towards flexibility in management.
(v) Evolving `Flexible Systems Management’ and other evaluation techniques (propositions) for organizational excellence & HR productivity.

1.7 Organization of the Thesis

The thesis has been divided into nine chapters. Chapter one deals with the objectives of the study, identification of research work and inherent key issues. Finally, it outlines the research methodology.

Chapter two deals with literature review and some central themes of flexibility and other propositions briefly. It also covers HR Architecture, historical background of management and emerging modern trends in HR. Apart from briefly discussing HRM dimensions it also covers HR measuring
and its alignment aspects and integration into a business performance system.

**Chapter three** exclusively deals with flexibility as its central theme and its manifestations. 'Flexibility' is the only one single-most dominant factor, which is inbuilt and is inherently found in all the issues of management. This is the one determinant which leverages ultimately Human Capital, co-creation of value system into an outstanding high performance system. This chapter also briefly covers various manifestations of intelligence and emotional quotients.

**Chapter four** deals with study design and evolution of research plan. Herein six propositions are evolved namely (i) Pareto Law (ii) Six Sigma (iii) Theory of Constraints (iv) Power of Full Engagement, (v) Continuity (Flexibility) and, (vi) HR Balance Score Card (BSC). Then it describes methodology of entire study culminating into synthesis and proposed study framework.

**Chapter five** deals with the qualitative analysis, i.e. interviews with the senior's scientists, including Directors of the selected representative DRDO labs. This brings out insights about the organization, their main core strengths and weak-links for further enhancements of the organizational productivity. Finally, the main important ingredients/determinants emerged out and learning issues identified under all the six propositions briefly.

**Chapters six and seven** deals with case-studies (SAP-LAP analysis) and empirical studies (questionnaire analysis) respectively. Both the
chapters bring out revealing findings about various establishments of DRDO, which are further examined and validated through six evolved propositions. The evolving thought process from the studies suggest workable HR performance drivers for achieving organizational excellence.

**Chapter eight** deals with synthesis and proposed framework of the entire study. The dominant issues influencing the success of emerging determinants, their linkage maps have been evolved. The emerging determinants reveal that adequate interchangeability, continuum management and HR flexibility exists in the organizations. The linkages significantly provide and successfully correlates/co-creates the human capital values as well as HR performance drivers and evolves into three powerful experiential learning models for achieving organizational excellence.

**Chapter nine** presents a summary of the major findings and the recommendations for implementation of high performance work system (HPWS). The significant research contributions made in this work have been highlighted and the limitations of the study are also brought out. Specific suggestions have been made regarding possible areas of future research work. It is hoped that this research work may provide an efficient-framework and platform for the various organizations for imparting them much needed upshot in the work-culture.
1.8 Concluding Remarks

In the present study, some ingredients of good organizational dynamics/culture and HR developmental aspects have been attempted under changing business scenario and analytically presented. Identification of flexibility needs and creating flexibility in management systematically for higher R&D productivity has been attempted. Development of a few case studies of large and small size R&D Labs and also successful and failure aspects have been discussed in an interactive and integrative fashion for enhancing productivity. While evaluating organizational excellence, other principles and propositions (like Pareto Law, Six Sigma etc.) have also been attempted, analyzed and learning issues for passionate work-culture brought out. Finally, the study culminates into few innovative experiential models and linkage maps of essential determinants for achieving organizational excellence.

Eventually, it will be observed from the present study that this research methodology and findings may help in better functioning of the R&D organizations and may provide a good platform for further specific research activities in more detail. A review of the literature on related aspects of the study is presented in the next chapter.