

Ideal Characteristics of Managers in Manufacturing Companies

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Abstract

The role of managers in manufacturing companies is critical for ensuring efficient operations and achieving organizational goals. This literature review aims to identify and analyze the ideal characteristics of managers in manufacturing companies by synthesizing existing research and theoretical perspectives. The review examines various dimensions of managerial effectiveness, including leadership styles, communication skills, decision-making abilities, technical knowledge, and interpersonal competencies. Additionally, it explores the impact of these characteristics on employee engagement, productivity, and overall organizational performance. The findings highlight the significance of managers who possess a combination of technical expertise and effective leadership skills, such as transformational or participative leadership styles. Moreover, the review emphasizes the importance of strong communication skills, adaptability, problem-solving capabilities, and the ability to foster a positive work environment. The implications of these findings suggest that organizations should prioritize the recruitment, development, and training of managers with these ideal characteristics to enhance manufacturing operations and achieve sustainable competitive advantage. Further research avenues are suggested to explore the contextual factors that may influence the relevance and effectiveness of these ideal managerial characteristics in different manufacturing settings. Overall, this literature review contributes to a deeper understanding of the ideal characteristics of managers in manufacturing companies, providing valuable insights for practitioners, researchers, and policymakers seeking to optimize managerial performance and drive organizational success.

Keywords

General Manager, Challenges, Technological Advancements, Globalization, Manufacturing, Strong Communication Skills, Adaptability, Problem-Solving Capabilities

1. Introduction

The transformations of business contexts, the continuous development of innovative technologies, and the renewed expectations of customers, employees and all stakeholders have an impact on managerial practices and the role of managers, at all levels. The world would thus be increasingly Volatile, Uncertain, Complex and Ambiguous (VUCA). The current health crisis has confirmed, if necessary, these four characteristics, which were certainly already present but which we did not always want to see and/or accept. The manager for tomorrow will have to be appropriate for future challenges.

Examination of the management literature shows that too few works provide visions of the manager of tomorrow. The works resulting from the theories of the organization are content to highlight different typologies of managers. About the transformation of the world in the broad sense of the term, it seems important to be able to acquire reading grids to decode the heavy trends, the weak signals, and the breaks within organizations, at the level of managerial practices. It is therefore useful to develop applied research on the manager of tomorrow. This is the purpose of this communication. Initially, we will expose the retrospective vision of research on the manager and the stakes which a prospective approach represents, and then we will present the methodology of perspective of the trades and the field of application. We will end with an evaluation of the results, organized around three worlds and nine scenarios and a discussion highlighting the impacts in terms of training, HR support and visions of managerial policies.

1.1. The Retrospective Vision of Research on Manager and the Challenges for Tomorrow

One of the difficulties that can be encountered in the context of bibliographical research on the profession of a manager is, in a certain sense, the very great profusion of scientific articles, books, blogs, and press... existing today on the management and on the person who must implement it as closely as possible to people and customers. However, in a rather astonishing way, we can only note the absence of a definition of both management and the job of a truly shared manager.

1.1.1. The Retrospective Vision

One of the rare authors to have defined the manager is [Mintzberg \(1973\)](#), for whom the manager is “any person who has responsibility for a formal organization or one of its sub-units. He is vested with formal authority over his unit, and this leads to his two basic purposes”. [Drucker \(1954\)](#) does not define it directly but remains quite close to Mintzberg in our opinion since he considers that the role of the manager is to define the mission of the organization, to set objectives, to organize the work, to motivate and involve people, training them, setting performance standards, and evaluating results. Other Anglo-Saxon authors who are members of the School of Human Relations have again endeavored not to define the manager, but to identify styles-modes of command (not to say lea-

dership) which go from authoritarian-autocratic (Lewin, 1935; Likert, 1961; Blake & Mouton, 1964), laissez-faire (Lewin, 1935; Blake & Mouton, 1964), consultative (Likert, 1961) participatory-democratic (Lewin, 1935; Likert, 1961; Blake & Mouton, 1964) and finally to the integrator (Blake & Mouton, 1964).

For our part, we consider that these works which are based on the concept of leadership by relying on the dynamics of groups, and which tend to propose “ideal” styles or profiles raise questions in our scientific field. So, should the leader be considered a professional alongside the manager or not? This should be questioned much more in our opinion in the research work. For us the answer is negative, we join in this respect Noguera and Plane (2016) for whom “being a leader is not a status but a state.”

About the main missions and roles identified in the literature, it is possible to make a synthesis through four main fields of activity which are: the management of activities and production; team leadership and people management; contributing to strategy development; contributing to organizational change. However, what seems to us to emerge from the literature relates more specifically to the questions of the articulation of the strategy with the reality of the life of the teams as well as the supervision or even the evaluation of the people and their involvement in the implementation of changes. One can only note in the literature a certain dichotomy between the supervision of people and the piloting control of the realization of the activity, which crystallizes perhaps the confusion but also the interrelationship between management activities and managerial activities.

In the end, we propose to retain in this communication, the definition of the manager that we proposed (Payre & Scouarnec, 2015) namely that “the manager is for us, any person who exercises a management function, whatever his or her hierarchical, functional or divisional positioning (or lack thereof) as well as his status within the company; with one or more persons who exercise or not, on a principal basis, themselves, a supervisory function”. We thereby clearly distinguish ourselves from Mintzberg (1973) since we consider that the profession of manager and the function of supervision can quite well be practiced sometimes outside of formal authority or rather of formal organization.

Drucker (1954) is quite close to Mintzberg since he considers that the role of the manager is ultimately the management of value and would consist of defining the mission of the organization, setting objectives, organizing work, motivating, and involving people, training them, set performance standards and evaluate results. Historically, this management of value has focused on activities 1, 2 and 6 and 7, perhaps to the detriment of activities related to the organization of work, the motivation and involvement of people and their training.

1.1.2. Challenges for Tomorrow

The professional forecasting method makes it possible to highlight emerging, transforming, and obsolete professions. Indeed, it seems important to us to show the possible Individual/Organization dialectic through business exercises carried

out intra or inter-organizationally. The motivations that drive us to undertake research work in business foresight can ultimately be expressed as follows: An emphasis on “possibilities”: business forecasting is not part of a deterministic logic but on the contrary in the possibility of imagining the possible evolutions of a given job. It opens a spectrum of reflection and action regarding the different possibilities of appearance, transformation, or disappearance of trades. A co-construction by the actor-experts: the business forecast is based on an active methodology based on the participation of the people who exercise the profession(s) analyzed—the actor-experts. The latter, unlike skills-based management approaches, are therefore players in the changes to come. As a result, the risks of desocialization previously highlighted with the logic of competence will probably be minimized. A reevaluation of the concept of the profession: the prospective profession also allows identification with the profession. The problem of identity at work discussed above and resulting from a difficulty in abandoning the notion of workstation, disappears with the prospective profession which allows the employee to become much more aware of his skills, and especially of their possible evolutions and values over time.

2. Management Function

We propose an “extended” concept of human resources management in space and time. Indeed, we postulate that the management of human resources must “exit” from the company and that it is possible through business studies carried out in a transversal way on several organizations, to serve thereafter the construction of internal HR policies for given organizations. Internal/external dependence is essential here: the solicitation of actor-experts belonging to organizations from different sectors of activity makes it possible to highlight, beyond the divergences or convergences of views, the real dependence on internal and external resources. A “broader” vision of human resources management, going beyond the strict framework of a given organization, therefore, seems possible.

The break with a tradition of forecasting: so-called forecasting management approaches seem to have demonstrated their inadequacy in an increasingly global and changing competitive environment. The very idea of perspective in the sense of [Czakert and Berger \(2022\)](#) seems more relevant: “to see far, to see broadly, to analyze in depth, to take risks and to think of man”. At the heart of general and specific changes, the management function bears a major responsibility for the commitment of social actors. Through his conceptions of the practice of the profession, the director induces ethical and political orientations for professionals.

Is there a definition of the function of management that is specific to a field primarily open to humanist values? Is there a specific form of management to help everyone find their place and exist at the heart of society, whatever the form of their difficulties? To analyze the different positions of actors in the management function, it may be interesting to accentuate the line starting from the

conceptions of social action and the representations of users who decline “figures of the director”.

The stakes of the management function will lead us to propose shifts about the currently perceptible developments. These could open avenues for understanding new forms of relationships and responsibility, considering the changes in the sector, in society and the missions entrusted to establishments and social and medico-social services.

2.1. Evolution of the Sector

To try to identify how the evolution of the sector influences the different types of management, we could rely on the typological clarification that we have constructed and developed in the third edition of our book on the implementation of user rights. Everyone’s conception of social action will influence their mode of intervention. Social action is historically part of the function of maintaining the established order. It is a factor of order. Another trend situates social action in a dynamic of change. Directors, between these two tendencies, will develop conceptions of their function based on logic either of conformity or of subversion. At the same time, the perception of the user, as responsible for his difficulties or, on the contrary, victim of his problems, will strongly induce the attitudes deployed towards him. The intersection of these two axes will draw trends making it possible to identify the positions of directors, according to their conception of social action and their representation of the user.

2.2. The Normative Trend

In this conception, the director considers that the user is responsible for his situation and that the purpose of social action is to reinforce the established order. In this arrangement, one could identify two figures of the director, corresponding to two perceptions of the user: the paternalistic figure, corresponding to a protected user, and the religious figure appealing to a conception of the unsuitable user.

2.2.1. The Protected User: The Paternalistic Figure of the Director

As its name suggests, the protected user will provoke attitudes aimed at ensuring maximum safety. The search for autonomy will therefore not take center stage and the special attention with which he will be surrounded will influence all the interventions that will be deployed around him.

The manager situated in this perception will therefore tend to develop understanding and authority as a guarantor of safety as a priority of daily actions. Attentive to the smallest element of everyone’s daily life (user and professional), he will support both to ensure the well-being of all. Assured of the order he establishes; he is convinced that he holds the power of well-being over all the people for whom he is responsible. For him, his mission is exercised in a direct delegation of the State.

2.2.2. The Inappropriate User: The Religious Figure of the Director

The maladjusted user cannot adapt to social life through his problems or his behavior. The actions put in place will therefore be considered to allow a “rehabilitation” of the user to social life. This projection involves educational or re-educational attitudes generating methods of persuasion. The director, situated in this perception of the user whom he deals with, will endeavor to impose strong values as references to any change. It does not matter that the user does not live with the same values or the same culture since the objective is precise to instill in him new references allowing him to fit into society. It will therefore be necessary to build both for the users and for the staff a universe in which only the director is authorized to express the meaning of the actions. The power he wields was transmitted to him to ensure an almost mystical mission.

2.3. The Managerial Tendency

In the managerial tendency, the user benefits from State subsidies and, as such, must accept the constraints. The director applies the orientations defined by the political representatives, even if it means authoritatively imposing the main lines.

2.3.1. The Administered User: The Figure of the “Little Boss”

The dominant idea of this trend equates everyone to a group whose symptoms should be treated. The director will intervene in the management of a social problem. Criticism of the system cannot be considered. The application of instructions guides the actions and directives given. Authoritarianism can express the absence of questioning and the conception of social and medico-social action in which everyone must accept the place assigned to them. The director is the executor of a public policy within the framework of stated mechanisms. Professionals are only more subject to the injunctions of the “chief” who must apply to a predefined program.

2.3.2. The Beneficiary User: The Figure of the Leading Technocrat

The position of beneficiary user reduces his function to an acceptance of state largesse. Professionals must apply themselves to verify the proper use of the subsidies distributed. The director is the guarantor of this redistribution. To do this, it must set up systems of control, organization, and transparency. The director must be able to reassure the decision-makers about the effectiveness of the means they deploy and to make the populations concerned accept the relevance of the actions offered to them. The planning of actions, and their evaluation considering the costs, the benefits, and the managerial interest are at the forefront of the management function.

2.4. The Militant Tendency

The militant tendency mobilizes a cause that goes beyond the symptomatology or the difficulties of the user. The discourse on the user is worth more than the action carried out. The denunciation of identified causes becomes the priority

objective of any action.

2.4.1. The User Represented: The Figure of the Protesting Director

In the figure of the user represented the idea emerges for the professional to speak in the place of the user. The discourse suffocates the individual, even if he wants to be glued to the realities of the user himself. The director marked by this position puts forward a critical discourse on the responsibilities of society in the problems of the users with whom he intervenes. Mobilizing the professionals around an elaboration of the societal causes and the responsibilities of the policies which led to the situation to be dealt with, the director develops a challenging position about society. Technical discourse has no place in this position. Only immediate responses to symptoms are prioritized for action.

2.4.2. The Alibi User: The Figure of the Charismatic Leader

The alibi user represents the paroxysmal form of the militant tendency. The user disappears completely behind the cause that is served. Professionals are chosen based on their adherence to the cause and not on their professional skills. The director, the standard-bearer of the defended ideology, will know how to grasp any new situation to denounce those responsible for the user's situation. Capable of mobilizing crowds, he will be able to press the emotional fiber and will not hesitate to put users in the spotlight to succeed in highlighting the social dysfunctions he denounces. The director situating the user, the alibi of his mission, carries a strong political discourse; it is part of a debate that it will know how to publicize to reinforce its positions.

2.5. The Liberal Tendency

The liberal tendency draws its legitimacy from the evolution of the last thirty years. Thinking of the user as responsible for his difficulties and setting up individualized interventions corresponding to the expectations of the user himself strongly mark the conduct of actions.

2.5.1. The Patient User: The Figure of the Master

The term patient user implies the idea of a medical relationship. The user is treated for his symptoms by "knowing" personnel. A certain submission of the user linked to the respect for the competence of the "carers" marks the relationships. The director occupies an idealized place. He is the one who has the answers and who can implement the actions most appropriate to the situation. There is no question of disturbing him without serious pretext. His overflowing and multiple activities are linked to the knowledge of the situations attributed to him. The distance is put as much by its direct collaborators as by the users themselves. Recognized by everyone, he enjoys a special aura that protects him from everyday life.

2.5.2. The Client User: The Modernist Figure of the Manager

The client user defines a modern conception of the posture of the user in his re-

lations with establishments or services of social and medico-social action. In search of the best service that will satisfy his expectations, the client user establishes a relationship that places him as a consumer of the actions developed for him. The director will establish organizational rules close to the commercial sector. Concerned about the satisfaction of the user, he will manage the project and the team to be in conformity with the standards and to create procedures which will protect him from any external criticism. Mobilizing professionals around societal changes will rely on entrepreneurial models to lead the team, imposing training, innovative practices, new theoretical references.

2.6. Challenges of the Management Function

We have just identified shifts, tendencies, and telluric forces which structure, sometimes without our knowledge, models of the function of management. The social and medico-social sector, perhaps more than any other, is particularly affected by the political orientations of the society in which it is developing. Whether hollow (to face its “shortcomings” or its rejections) or highlighted by a political power anxious to respond to the pressure forces of lobbies, the sector experiences its internal changes in significant dependence on its context.

All these elements create an increasingly deep gap between the educational function and the management function. The profession of director no longer requires the same professional “sources” as before. The skills sought are no longer the same. The qualities required to call for project support, administrative and financial management, knowledge of the different notions of law, support for change, and the ability to implement the social and medico-social policies defined by elected officials (now familiar with a sector of which they had only relative knowledge until the laws on decentralization). Gradually, the responsibilities of the director of the establishment or the social or medico-social service merged with those of the economic sector. We are witnessing a form of ideological “smoothing” of the function of the business world. Beyond the figures mentioned above, what movements can we consider around the function of direction? Management was built on the “ruins of the profession”.

2.7. The Upheaval of Places and Roles

One of the major reasons for the profound change in the profession remains the end of the Glorious Thirties with the implementation of political choices aimed at reducing the costs of social and medico-social action. It is indeed common to assert the financial weight of social and medico-social action without comparing the resulting benefits. This particularly significant and growing constraint since the end of the 1970s strongly marks the management obligations of establishments and services. There is only one step from there to favoring departments with priority competence in this area. Educational and social experience seems to be moving further and further away from the requirements sought for management positions. As evidenced by the growing number of young candidates

graduating from less management applying for management jobs and the low rate of educators or field professionals tempted by the process.

New Benchmarks to Be Drawn up with Users

The change in the relationship between professionals and users profoundly transforms daily practices and the role of the director in the relationship between the internal and the external. Troubled by the current developments and destabilized in their bearings, the professionals of social and medico-social action seem to undergo the upheavals by distancing themselves from their initial commitments. The risk of thinking of the new relationships with users as market-type relationships can emerge in this context. The director would then be the manager of new relationships aimed at satisfying the client and setting up procedures as mandatory references of the relationships. The management approach must instead focus on applying the texts with vigilance to adapt them to the population received. Management is locked into the logic of the market.

2.8. Managerial Pressure on Leaders

The weight of responsibilities implies an ever more acute knowledge of the notions of law: labour law, and user rights, without forgetting the growing constraints in terms of health and safety. However, the background of the profession does not prepare for this daily vigilance and the permanent risks involved in interventions with populations in social or psychological difficulty.

The penal consequences of the slightest error require the mobilization of time, training and constant attention to the framework and safety, procedures, and compliance with the rules. This permanent pressure can take the manager away from his primary availability and lead him towards a strict application of management rules, reassuring no doubt, but unsuited to the social link mission of the profession.

Professionals alongside the interests of users

The need for the director to understand the stakes of the current changes should allow him to assume his responsibilities without losing sight of all the actors. It is from the negotiating bodies with professionals and with users that the director will promote the emergence of common interests and the construction of a new culture and new practices. Beyond the necessary managerial skills, the director must be able to transmit the objectives, defend the interests of all and build a line consistent with the mission entrusted.

2.9. Management and Culture Shock

Most managers in offices in the sector are professionally committed to life choices (personal and political) linked to the desire to work with those most in difficulty. The human dimension of daily activity is, in general, the determining factor in initial vocational guidance. Time and personal evolution have led the social worker (promoted to managerial positions) to take on responsibilities that take him somewhat away from the field. Confronted with mutations both inter-

nal (on the psychic movements to which the person who changes place is subjected) and external (on the important transformations of society, of the profession, of regulations).

2.10. The Construction of a Renewed Culture

The current challenge for any director in the office is to support the changes underway to allow the renewal of the specific culture of their field of activity. Bringing the sector into the 21st century without distorting the function of social ties, without modelling professional references on industrial or commercial models, and without using the particularity of the activity to instrumentalize the action in a particular political discourse, are part of the pitfalls to be avoided to reinvent the values and performance of a profession rich in history and skills. This evolution involves a radical change in the conceptions of relations between professionals and users, made of alliance, adaptation, debates, flexibility, but also argumentation, and professionalization which will consolidate the recognition of the social and medico-social sectors.

2.11. Management under the Influence of Technology

The growing requirements of regulations have challenged practices. Going from the exceptional regime to common law makes it possible to reintegrate society in all its components by gaining legitimacy. New requirements can be experienced as constraints, but constraints are essential to the development of innovative projects. Ideas and projects are always built on external obligations over which the actors do not have initial control. It is therefore essential to consider laws and regulations as well as their evolution as complementary tools that can lead to interesting improvements. In order not to become a “technocrat”, the director must master the technical issue.

The director, therefore, sees himself under the obligation to develop his fields of knowledge and skills. The change of posture to which he is invited must allow him not to undergo the necessary changes but to control their course in a perspective of dynamic and fruitful adaptation. The necessary flexibility, associated with a certain “height of view”, will avoid the technocratic risk that corresponds to the implementation of protocols which aim only to reassure and control.

The transformation has a dual impact on the role of the manager: as an actor, since it is he who is responsible for leading it; as an object, since this role is called upon to constantly adapt to changes in the operation and organization of the company. Analyzing the role of the manager through the prism of transformation is therefore doubly interesting because transformation, a sensitive situation par excellence, reveals and illustrates particularly well the whole range of activities and skills of the manager and because its observation provides information on how the manager’s role must and can evolve with his environment and the demands of his time. Because while change has become common practice (Autissier, Johnson, & Moutot, 2015), it has not remained uniform. Everything changes, including change, which is accelerating and generalizing. Change

management approaches evolve accordingly, and the role and skills of the manager evolve with them. The human dimension now seems to take precedence over the organizational dimension. The posture of leadership (Kotter, 1990) is now preferred, in discourse at least, to that of management. However, this development is not uniform and may find favorable conditions depending on the sectors of activity or the size of the organizations. Managerial practices are inseparable from organizational practices and modes of social regulation (Galambaud, 2010).

In modern words, Technology plays a crucial role in the effective and efficient management of strategic performance. Strategic management is considered the process through which the objectives of an organization are set and plans and policies are framed for achieving the goals. It refers to the development and formulation of specific objectives which the organization aims to achieve to gain a competitive advantage in the market. Effective and competent strategic management depends on organizational resources and proper evaluation of the internal and external organizational environments. This research proposal aims to deal with the divergent aspects of strategic management and the role of leadership in the Information Technology (IT) businesses of Continental Europe. This includes competitive advantages, strengths, resources, contemporary challenges, and organizational structure. For this specific research study, the multinational IT organizations of Europe are taken into consideration, which are known for business strategies that are sustainable and capable of meeting the dynamic needs of stakeholders. The primary product and service range of these organizations comprises cloud services, data security services, software, IT consulting, and comprehensive digital solutions. The concurrent mission of major European IT companies is to emerge as the best global IT service providers by making a dedicated space for themselves in the hearts of the employees and consumers. The vision of European Tech giants like Accenture is to assist people in accelerating innovations and improving their living standards (Sorbelli, 2020). Their approach towards the cultural diversity of the vast European mainland and ethics makes it easier for the stakeholders to focus on efficient and sustainable practices. Thus, tech companies aim at promoting powerful and effective strategies for earning themselves a strong competitive advantage in the market. Europe hosts many tech giants like Accenture, Capgemini, SAP, Atos, T-Systems, Spotify, etc. The vision of Europe is to transform these IT companies into the leading global format, welcoming innovations for setting improvement in the way that world lives and works through making the best use of leadership and strategic management.

The widespread adoption of cloud computing and process automation has required new skills from IT departments. Large investments in infrastructure are being replaced by higher expenditures on services. Meanwhile, the pressure from companies to take a leading role in digital transformation is greater than ever. For several years, the European Commission has been convinced that the competitiveness of companies in Europe is largely based on the effective use of digi-

tal technologies, which implies having the appropriate skills to implement them. However, in most European countries, there is difficulty in finding a qualified labour force that correctly meets job needs in the digital sector, thus reflecting a growing gap between the skills needs demanded by companies and those available on the European labour market.

Considering this standard, the people who practice genuine leadership will in general acquire noticeable quality and stretch out beyond the opposition. For the people who are embedded, or expect to be embedded in the corporate world, it is important to remember that there are a few contrasts between chief and pioneer. First off, a supervisor is that individual who provides orders without directing his group. He is more worried about his capacities and self-advantage than with his workers. Consequently, he winds up being a tyrant individual, contemplating results, and benefits, and, in certain circumstances, creating dread in the experts he is liable for. By having a more advantaged proficient status, the supervisor acts with predominance and authority, trying continually to make it clear to his group that he is the chief. It is a figure dreaded, loathed, and kept away from by different associates. Dissimilar to the chief, the pioneer is the individual who moves and guides his group. It's who says, "We're going" rather than "you're going". He is the person who ponders the course of exercises, on the grounds that for him, the obligation should be divided between everybody, including him too. Subsequently, he has a decent connection with individuals around him and, particularly, with his workers, since he is continually ready to tune in, as well as being consistently open to changes that are positive for the organization, for him and furthermore for the colleagues. The pioneer supports inventiveness and spurs his partners to advance, since he accepts that the prosperity and great usefulness of his group are just about as significant as the outcomes. Along these lines, in the workplace, the act of the board can be changed and adjusted by various everyday circumstances.

3. Transactional and Transformational Leadership

In the corporate world, there are two more normal structures: Transactional initiative and Transformational administration. Perceive how every one of them functions, beneath:

3.1. Transactional Leadership

In this kind of initiative, the chief acts like a chief and not a pioneer. Its strategies are for the most part directed by acquiescence to the standards and consistency with set up objectives, as well as following the possibility of reward relative to execution. This is a director who isn't worried about understanding his group's inspirations or expecting issues, he simply follows the stream and satisfies requests. A kind of administration can be confirmed by its application until the finish of the last century, by the qualities of associations. By zeroing in just on outcomes, Transactional initiative uses methodologies to compensate and rebuff

experts, as per their disappointments or triumphs. It is simply dedicated to making the objectives accomplished, yet it isn't worried about rousing, moving, creating, or drawing in your group. It is about straight-line the executives. It doesn't permit its experts to think "fresh". Here, interestingly, everyone satisfies the undertaking relegated to him. People should maintain the attention on what your chief pronouncements as the principal objective. In this manner, during emergencies and difficulties, it is viewed as a brilliant choice to tackle issues rapidly and viably.

3.2. Transformational Leadership

Not at all like value-based initiative, has Transformational leader considered one more kind of the executives. Here, the arrangement is that change, the change of the organization and individuals are the most ideal ways of making progress for the advantage and achievement of the business. Thus, the pioneer works in association with his devotees, to distinguish the qualities and improvement points of the venture. Specifically, to bring up the angles that should be improved, truth be told, changed. This idea of administration characterizes the conduct of the best chief: a director who supports the superior exhibition of his group, in view of impact, motivation, model and inspiration. For this situation, the mainstays of initiative depend on trust, regard, cooperation, and responsibility. The Transformational chief knows the singular inspirations of his adherents, understanding the profile of everyone and fostering their techniques as needs be. He realizes how to completely partake in the capability of his group, and furthermore keep the project worker and project workers in a state of harmony, guaranteeing good outcomes are accomplished for everybody.

Perhaps the most valuable characteristic of Transformational administration is the activity of totaling workers, as it welcomes everyone to partake in the organization's transformative interaction and to consider it in a foundational way. For this, a cooperative energy is made, because it is along with the pioneer that these experts are welcome to foster their decisive reasoning and work together with their thoughts and answers to take care of the issues introduced. Not just, Transformational authority can invigorate the feeling of direction in individuals, with the goal that they believe they have a place with the most common way of building results. As well as being roused by the organization's vision and qualities to put forth a strong effort and have the option to push ahead constantly.

Thusly, we can say that the contrasts among Transformational and Transactional initiative are essentially in the way that the previous is centered distinctly around results, not considering the personal satisfaction of its workers, utilizing award or discipline of its representatives, of as indicated by the disappointments and accomplishments of each. While the Transformational one is centered around results, however it is likewise worried about individuals' advancement. All in all, it is a more acculturated and Transformational initiative style. Being less procedural. This is the genuine Leader Coach!

3.3. Preferred Leadership Style

Customarily, the Transactional style is yet the most practiced among directors today, notwithstanding, this reality has been changing gradually. Qualities that have been recently considered conduct shortcomings (like cautious treatment of companions and subordinates) are more esteemed in business sectors that request a ton of systems administration from their chiefs. Also, representatives have progressively needed to feel participative in the business, with the need to uncover thoughts and look for space for them to be heard. According to this point of view, acting in a Transformational way is likewise turning into a decent practice. However much everybody will in general be more value-based or Transformational, being seen in one of these styles just causes the pioneer to get what their usual range of familiarity is. That is, their initiative style isn't really a determinant of nonstop conduct, yet a design wherein individual likes to work, and even though ladies are perceived as more centered around individuals' turn of events and worried about the individual inspiration of their representatives, teammates, concentrates on express that there are no huge contrasts in abilities and administration styles among people. As per Gender Intelligence, complete pioneers are the individuals who can progress between the two styles of authority in concordance, utilizing every one of them as indicated by the circumstance.

Dissimilar to other administration styles, Transformational authority is tied in with starting change in associations, gatherings, yourself, as well as other people. Transformational pioneers propel others to accomplish more than they initially expected, and frequently considerably more than they expected. They set additional difficult assumptions and for the most part accomplish better execution. Genuinely, Transformational initiative will in general have more dedicated and fulfilled devotees. This is principally because Transformational chiefs enable devotees. In any case, value-based initiative that keeps up with or proceeds with business as usual. It is likewise authority that includes a course of trade, by which devotees get quick and unmistakable awards for completing the pioneer's requests. Transactional authority can appear to be quite essential, with its attention to trade. Being clear, zeroing in on assumptions, giving input are significant initiative abilities. Value-based initiative practices can include explaining what is generally anticipated of adherent execution; disclosing how to meet these assumptions; and apportion remunerates that are dependent upon accomplishing objectives.

The Transformational authority style, as the name suggests, is identified with the drive for change and change inside associations and gatherings. Pioneers who follow the Transformational line are known to spur colleagues to do more than they should, and surprisingly go past what they believe is conceivable. Gatherings drove in this style normally manage higher and additional difficult assumptions, and by and large figure out how to convey better execution to the pioneer, because of the responsibility and fulfillment in doing the undertakings. Among the different sorts of initiative, the Transformational chief style is known

for engaging and motivating your group to develop, continually looking for development and change.

The qualities of this style are the independence given to the group and the consolation to think “fresh”, which make a relationship of trust and association around an objective. In any case, in organizations where there is a more customary view and where existing cycles are esteemed, Transformational administration may not be all around acknowledged. Then again. Transactional initiative alludes to a sort of relationship dependent on trade, like an exchange. Here, the pioneer gives directions to the group and, contingent upon what is given back, every part will be compensated or rebuffed. This is one of the most level-headed and extremely basic kinds of authority, where pioneers illuminate the errand, explain what is generally anticipated of colleagues, and clarify how assumptions can be met. Not really set in stone dependent on accomplishment of objectives. For this situation, there is a constraint of inventive thoughts, making the climate unbending and expanding strain on representatives. Inventiveness will in general be smothered, and work is performed uniquely to satisfy responsibility and get reward. Be that as it may, the positive part of Transactional initiative is the decrease of questions and disarray, as the undertakings are plainly and unbiasedly passed on, just as the assumptions. Also, the representative will consistently have criticism of their exhibition, regardless of whether it is fortunate or unfortunate.

4. 21st Century Leadership

Leadership is much about asking questions as it is about seeking answers, whether a person is in the tech industry or vegetable distribution. It is about encouraging dialogue and debate, creating mechanisms to quickly raise red flags, and learning from mistakes. These abilities require discipline, attention to detail, and old-fashioned common sense. Good business leadership means a person can anticipate market trends and changes, and that means he/she has the willingness to adapt when necessary.

The task of the leader is centered on the strategic process essentially, interpreting the world, setting the course, and steering the organization to achieve the objective. In practice, multiple approaches to leadership and strategy testify to the variety of the human and each says something about what its author imagines understanding of the functioning of the human being and the organizational fact. Such a theory appeals to a particular public but is rejected by another. Such an approach felt provocative here, will be perceived elsewhere as quite naive. Some proposals are pragmatic, others conventional, and others finally seek to awaken inspiration. The definitive theories on competitive advantage follow one another in waves: strategic segmentation, SWOT-type modelling, building value, the learning company, values and culture, benchmarking, network organization, knowledge management, human capital, flexibility, high-performance teams, charismatic leader, emotional intelligence, etc. There wouldn't be this profusion

of offers if there wasn't a strong demand for strategic solutions. Beyond their variety, these approaches have one thing in common: the search for an ideal leader profile, an absolute model of strategy or organization to win. However, already more than fifty years ago, H. Simon denounced the claim of the misleading idea of optimization.

4.1. Digital Leadership

It will also be more difficult for the company to achieve change if the internal culture promotes the hierarchy of roles rather than information sharing, innovation, and transparency. We must not forget that the desire to learn continuously, interpersonal skills and the ability to adapt are the driving forces behind the success of industry 4.0 players. The leader must therefore become a "digital leader" a person capable of anticipating digital developments. This leader will have to accept that he does not have all the answers. The knowledge and spotting of trends will come from everywhere: from its teams, but also other departments of the company, from the Internet, from the competition, etc. It is necessary to define digital governance that will affect the policies, structures, roles, rules, processes, and standards necessary for the application of the "digital workplace" optimally and sustainably. (Digital Workplace Group)

4.1.1. Equipment Compatibility

The difficulty of integrating existing systems contributes to slowing down the process of industrialization 4.0. Several devices have informational protocols that are not compatible with the IT ecosystem. The presence of multiple information management subsystems such as VBA databases leads to additional transformation costs and system connection challenges. This is what is commonly called "Shadow IT". This designation is frequently used to designate information and communication systems produced and implemented within organizations without the approval of information systems management. Thereby, the definition of technological architecture and clear governance in terms of the use of the various systems and subsystems becomes imperative to the success of the project.

4.1.2. Harmonization of Business Processes

The difficulty of automating business processes is a challenge of Industrialization 4.0. The automation of these processes is the mechanism by which data, information and processes associated with the business are managed and transferred by technological means. The acceleration of information in real-time and the accentuation of the data resulting from the connection of the various systems force this automation. It becomes a prerequisite for industrialization 4.0. Aligning business processes with the enterprise IT ecosystem requires specific skills in system integration and is time-consuming and expensive.

4.1.3. Capital Investment

Some companies have fallen far behind in their industrial process. This delay is

partly explained by the nature of the products offered and customer expectations. Many small businesses have fewer than 10 customers. They maintain a strong relationship of dependence on them. It is difficult to carry out a major transformation while continuing to deliver the quality and on time required. Capital investment may be too risky. This capital is often tied up in the company's liabilities. The SME that has not planned for the reinjection of capital into the automation and connection of equipment will have difficulty making the switch.

4.1.4. Automate and Digitize the Business

Moreover, the current funding of institutions is not always prepared for this transformation of the manufacturing environment. Despite the subsidies offered, financial institutions remain hesitant to invest in digital transformation. Indeed, for many companies, this transformation requires investing both in the automation of production and the digitization of the workplace. Before experiencing growth, companies that will make the shift experience a drop in financial performance and ratios, which does not please traditional lenders. Digital leadership must therefore also develop within the financial community.

4.1.5. Loss of Current Skills

When a company begins automating work methods, it asks its operators to analyze their tasks to eliminate manual interventions. We have observed that the skills of current trades can be lost in this transformation. The expertise of a professional or a senior technician facilitates the automation and configuration of tasks associated with production. This design phase of the new production model provokes exchanges, leads to problem-solving processes, allows experimentation, and causes errors. It has become imperative to document this transformation to preserve the company's knowledge. Learning management systems should be developed alongside transformation. We find that many are developing an internal learning network commonly referred to as a corporate "wiki". This type of platform can include specific videos, a technical chat system, frequently asked questions, troubleshooting procedures, etc.

4.1.6. Skill Development

The human aspect is, without a doubt, the greatest challenge of this transformation. Labour development costs are significant. This development must take place at all hierarchical levels. There are no miracle solutions. The quality of the investment in the employees will guarantee the success of such a project. Floor workers are not reluctant to change, especially when the nature of the project and the business issues are well presented to them. The change management strategy and skills development plans must therefore be carefully prepared for the success of this transformation.

In an industry like IT, which is experiencing increasing sophistication of its products, innovation relies on a broad and complex knowledge base that is constantly growing as skills and know-how are disseminated. The competitive game,

based on innovation without neglecting the price variable, is accompanied by strong intertwining between the players. This context can be explained by the fact that a single firm cannot possess the entire range of technologies and skills required in this industry. Alliances are emerging as a suitable solution for acquiring complementary resources and skills and participating in the race for innovation. Various studies thus attest to the proliferation and diversity of agreements entered and the dynamism of this sector in terms of inter-firm cooperation. The computer industry, therefore, offers a privileged framework, due to its creative capacity and its dynamic of cooperation, for an analysis of innovation in terms of a portfolio of agreements.

4.1.7. Strategic Leadership in Industry 4.0

A few companies have deployed i4.0 technologies with an “end-to-end” approach and achieved global factory interconnectivity. Most are still in the initial stages, where investments are being made to save costs. The digital revolution is about much more than efficiency, and manufacturers who don’t consider new business models will likely be at risk of survival very shortly vis-à-vis the competition. Many companies launch i4.0 initiatives structured around a technology, augmented reality, or digital twin for example, rather than being an integral part of an overall strategic plan. Various projects are simultaneously carried out but rarely aligned. Beyond this technology-oriented strategy rather than industrial performance, companies lack agility due to their functioning in silos. For a de-compartmentalized and optimized approach, it is necessary to reverse the value chain, starting by establishing a diagnosis of industrial and technological maturity. It is then up to review current and future processes, equipment, and tools. But also, the management processes and the technological ecosystem compare the existing with the best practices in the sector. This first step makes it possible to select and qualify the priority performance levers favoring the creation of value in the company.

The transition to a 4.0 industrial strategy cannot be made without the involvement of employees. The latter must deal with a change in their way of working but also in their relationship with management with the use of digital technology daily (IoT, Big Data, Robotics, Augmented Reality, etc.). It is then up to the management to raise staff awareness to make optimal use of these new digital tools. The involvement of employees in the first phases of transformation by giving meaning, explaining why the company must transform and to what extent they are actors in this transition phase is the first milestone. Support is also provided through the implementation of training throughout the process.

Production or Supply Chain data are valuable resources for improving operational excellence. All these advanced analyzes require a significant effort to retrieve and structure the data. Before committing to this effort, an industrialist needs to adopt an iterative approach to collecting, storing, and then processing data to gradually validate the interest in the profession.

The best return on investment is possible by considering both the level of

maturity of the technology (the TRL scale—Technology Readiness Level—for example) and the prerequisites for adapting the operational models. The key to an Industry 4.0 trajectory is, then, to divide the efforts into progressive and coherent levels of transformation of the application landscape and the operational model.

A restructuring of the company is not done without the support of specialized and trusted partners. To ensure a decompartmentalization of the company in silos towards a strategy oriented on industrial performance, while integrating the technological challenges in the new i4.0 tools, it is necessary to develop the new value chain and measure the values requiring extensive support from partners. For example, this can relate to the optimization of the use of certain technological tools such as 3D printing, artificial intelligence, and augmented reality, in the overall strategy of the company.

The gap between the ambition of industry leaders and tangible transformation remains real and troubling. Few organizations achieve the transformation and scale necessary for new levels of value to emerge. On the contrary, compartmentalized management programs proliferate. Companies are travelling the road to Industry 4.0 without a clear vision of the future. Pilot overload is looming. It's time for business leaders to act so as not to miss the digital shift. To ensure the emergence of a new economic model, which strengthens their competitiveness, manufacturers must adopt a strategic and value-based approach to Industry 4.0. They must not neglect the human factor, which remains the cornerstone of the success of the project to materialize the technological opportunities in the transformation of the professions.

4.2. Issues Faced by General Managers

In 2014, the European tech giant Accenture, aimed at transforming itself into a tech-innovating company in place of just being famous for some retail store. This was followed by many more and these IT firms believed that framing new organizational capabilities for serving customers in innovative ways is extremely crucial (Niemeier, Zocchi, & Catena, 2013). Companies must perceive a significant shift in leadership and technology for realizing its significance and the possible ways for the organization for extracting the benefit of the shift to the maximum possible extent. European IT leaders envision that organizations make use of technologies like Artificial Intelligence (AI), Robotic process automation (RPA), IoT and blockchain, etc. for tracking the safe delivery of their products and services. Many companies have already invested heavily coupled with significant efforts for emerging as a technology giant so that they make effective and efficient use of modern technologies to innovate new business paths (Figure 1).

Europe often witnesses, loss of revenue, wastages of time, damage to reputations, and reduced productivity because of ineffective implementation of strategies and leadership, causing cybercrime issues like data theft and data misuse to happen. The primary consequences of these are a decrease in profit margins and

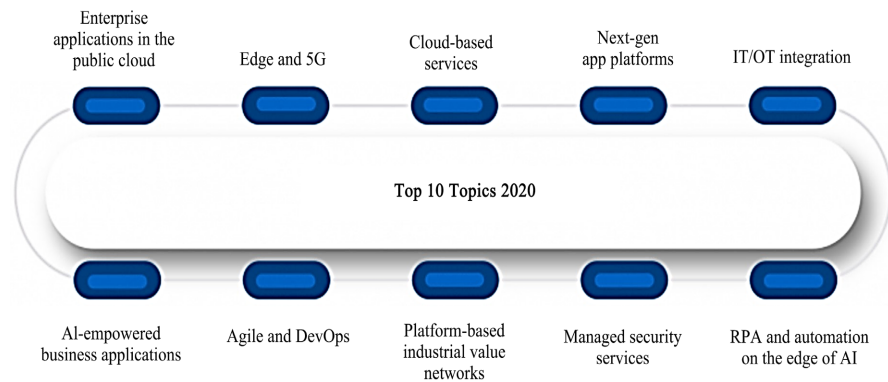


Figure 1. The top 10 IT trends for 2020 (11)—Trend 10: Agile and DevOps boost flexibility (SITSI, 2020).

the loss of revenues for these EU companies. This loss is often caused by hackers who retrieve sensitive financial information and make use of those data for extracting funds from such organizations. European organizations also face cases of e-commerce websites getting compromised resulting in loss of income since the customers can't make use of the site. This is often done by inserting a skimming hacking code into a 3rd party JavaScript library and enabling websites to insert the malicious code (Kumar & Ting, 2019). Agility transforms the quality of competitive actions of organizations to any environmental variations and this way it accelerates the performance. Hence agility is a vital driver for firms to achieve a competitive advantage in any market (Akkaya & Tabak, 2020).

Secondly, the consequence which is faced by European IT organizations is the waste of time working on creative and productive measures for these organizations. IT employees spend an enormous time tackling security breach and the associated consequences of cybercrime. In a situation, where the records of customers are compromised by security breaches, the reputations of the organizations get compromised. Clients whose monetary data and credit cards get grabbed by hackers are dropping assurance in IT compliance and are shifting their businesses elsewhere (Sober, 2020).

Owing to divergent security reasons, employees are required to enter many passwords and execute many time-consuming multi-factor authentication processes. Cyberterrorism is also negatively impacting, the major IT businesses of Europe. Many IT organizational websites which generate income are standing to lose revenues in specific events of downtime because of cyber criminals.

GDPR which was implemented to protect the privacy of EU citizens has also laid out many issues across borders such as increased data management overhead, huge penalties from lawsuits, securing communications, the requirement of compliance assured process workflow, etc. (O'Neil, 2021). While cloud computing is emerging in Europe, general privacy challenges imposed by GDPR is a concern. Data security and cost control top the list, followed by skills gaps, governance, compliance, and multi-cloud management.

Lastly, the COVID pandemic has adversely impacted the IT business in Eu-

rope. Organizations lost the bulk of their revenues owing to the pandemic and subsequent lay off resulted in reduced productivity (Davies & Tidey, 2020). For tackling COVID outcomes, these organizations framed short-term decisions for preserving some portion of the capital by temporarily pausing the pre-planned investments, along with relocating the financial resources for retaining and supporting the employees.

4.2.1. Current IT Strategies Used

The implementation of certain processes like enforcing strong passwords, making extensive use of social media awareness, securing wireless networks, effective data protection, protecting the e-identity, securing being scammed, enabled transparent tracking of the products and services in real-time are in motion. Organizations like Capgemini also make use of the Augmented Reality (AR) and the Internet of Things (IoT) to preserve the safety of their websites, products, or services (Plumpton, 2019). This technology aggregates data from each sensor at every point of the supply and provides the required information regarding the attributes of the product. The companies indulged in the effective use of virtual reality (VR) for boosting the customer-employee experience-virtual reality technology is used for training the associates and they learned the techniques by focusing on modules via the headsets. AR was advanced later from VR, with the specificity to let customers feel both real and virtual elements at the same time. (Boboc, 2019). Augmented reality is also used by companies in Europe for increasing safety, efficiency, and productivity on the manufacturing floor by making use of specialized goggles or smartphone apps, for coming up with real-life views of workers working in the plants. Accenture and Capgemini use Artificial Intelligence for effective management of stocks and preserving the cleanliness of stores and this intelligence refined their supply chain platforms further (Laguna-Salvadó et al., 2019).

Robotic process automation (RPA) is also used by companies for automating divergent supply chain processes, comprising predictive maintenance, data entry, and after-sales service support. RPA automates the routine tasks associated with high volume (Hofmann, 2020). Capgemini, SAP, and Atos make use of this technology for configuring new services and billing accounts. Quantum computing is used for enabling users to run experiments and algorithms alongside working with quantum bits have been kicked off in many parts of Europe. European Commission launched the Quantum Technologies Flagship Initiative in 2018 to positively exploit it for various EC projects. Germany has launched Europe's first 'revolutionary' quantum computer which can compute thousands of times in seconds than conventional supercomputers (Liman & Weber, 2023).

Cloud is another arena and many of the IT organizations including Accenture stepped into via a 5-year agreement with the tech giant Microsoft for making use of the Azure cloud platform. Cloud computing helps organizations to convert all their applications and websites to run natively on the cloud platform. Proper auditing and compliance are key for overall cloud security. Together with GDPR,

Cloud computing is a prime intention to enhance the EU’s strategy of data sovereignty, Digital Transformation Strategy, Industrial Scheme, and disaster recovery plan (Renda, 2021). As a strategy, companies should have a clear synopsis of the data lineage, including storage and mirroring locations, transferring techniques, possibilities to access and applicable laws (Figure 2).

IT can make the best use of its experiences, creativity, and expertise for defining effective and innovative solutions in its influential areas. European IT leaders aim in designing and deliver technology, and business solutions for fitting the needs of the customers and paving the pathway to the desired results. It enables clients to transform their organizations alongside considerably improving performance effectively and strategically in line with the changing dynamics of the market.

4.2.2. Current Leadership Strategies Used

Technology paves the pathway for development, but to take the optimum benefit of digital transformation without any disruption, thoughtful leadership is an essential factor. The leadership of the European IT organizations is structured and tailored in such a way that the benefits of digitalization can be positively exploited to the maximum possible extent such as releasing innovative services and products, bagging new clients, and penetrating newer markets.

For this Europe needs a determined policy for industrial leadership to survive in the tech storm created by U.S. and Asia. Europe ensures that these IT giants bear an ambitious vision related to digitalization and digital investments, a prominently clear governance, effective and productive skills of leadership, and the capacity to get continuously and consistently with the employees (Politico, 2019). Leaders in such organizations come up with a systematic approach, for successfully navigating the organizations via effective implementation of digital

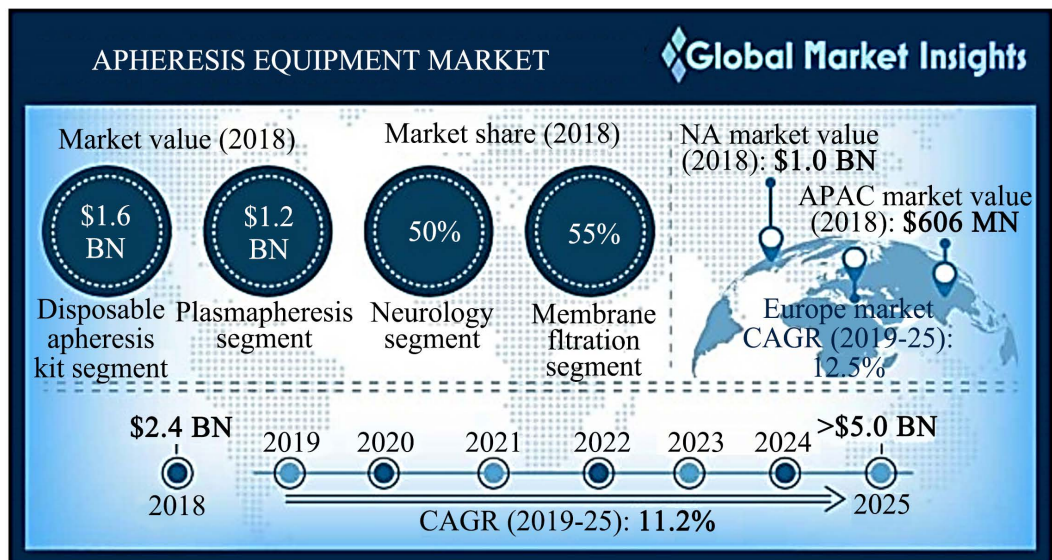


Figure 2. Europe Cloud Computing Market (Europe Cloud Computing Market Size & Share | Growth Trends 2032, 2022).

transformation alongside motivating and inspiring the employees for participating in the exciting journey. The leadership puts the maximum focus on the customers, and they work vigorously and dedicatedly for preserving and protecting the trust of the consumers.

In addition to this, the leaders also pay crucial attention to non-European tech competitors like Amazon, and Microsoft. Leadership thinks from the long-term aspect and do not compromise on the long-term values for the outcomes of the short term. Equipped with good instincts and strong judgments, the leadership of Accenture as an example thinks from divergent perspectives and puts up efforts for disconfirming the existing beliefs. Since they don't stop learning, they consistently aim of enhancing their skillsets and knowledge for exploring new possibilities (Modgil, 2021). European organizational Leaders elevate the performance targets with every hiring and promotion. They also ensure to appreciate of outstanding, trendsetting talents and deliberately do internal job rotation. Also producing the essential training and grooming sessions falls as a crucial responsibility of the leaders. Additionally, the leaders of companies like SAP aim to raise the bar and motivate teams to come up with premium quality processes, and revision of documents, services, and products alongside communicating and creating bold directions which inspire innovative outcomes constantly and consistently.

In these European companies, IT strategic management remains associated with a leadership's vision-guided approach, for redefining the position of the firm and outlining its goals. Specific issues associated with the external environment are identified by the leaders of the firm, by focusing on the threats posed by the customers, suppliers, and competitors. This knowledge ensures that the implemented strategies work for minimizing the existing pressures and while implementing the strategies, policies with the core competitors like Amazon and Microsoft, Apple are considered.

For remaining competitive, the leadership believes in forming reduced processes coupled with a customized marketing process. Also, the business strategy of the company is supported by a diverse range of consumer products, and the leaders of the brand provide powerful incentives alongside stepping into a liaison with employees for framing the most suitable and effective strategies. These strategies remain supported by information and data which are evidence-based on the internal and external environments. After producing the best strategy, the organizational leaders make use of divergent platforms for sensitizing more employees regarding it and the organization achieves its goal via the use of training sessions, emails, and memos. The leadership always engages in identifying the human capital and the most suitable resources for driving the necessary performance. Framing up teams coupled with training plays a crucial role in informing the employees regarding the innovative aspects of the proposed strategic process. The mission and vision statements of the firm are effectively utilized for informing the maximum number of employees and workers regarding the objectives associated with the organizational business strategy.

Every department of the organization remains associated with the strategic implementation process, as leaders from each department collaborate for framing the most effective and efficient strategies and provide positive results. In a nutshell, mostly Europe's Tech Leadership discussions revolve around the shared values of Prosperity, Leadership, Trust, Collaboration and Pragmatism (Kim & Yoo, 2019).

Leading the procurement measures of the organization include stepping into a productive partnership with vendors, hard-nosed negotiations, planning packets, and centralized buying which assists the company in providing goods and commodities at cheaper prices to the customers. The workforce of the organization is not unionized as the leadership designs all the measures of their benefits and provides them with grooming and training sessions on emerging issues.

By conducting efficient market research and effective polls on social media platforms, leaders focus on implementing an innovative strategy of operation which involves big branches in the outskirts of the urban areas, for gaining a monopoly in the market, via local prices, low rental costs, merchandising by brand name, concentric expansion, allotting little space for inventory etc.

It is noted that Europe with its multicultural essence, Corporate social responsibility (SR) is given ample focus for maintaining both employee and stakeholders' well-being as well as the sustainability of nature (Macassa et al., 2021).

4.2.3. Scientific Management of Digital Organization

Like the industrial revolution, it is not technology that improves the performance of our companies or even creates competitive advantages, but rather the questioning of existing organizational and operating models. Management experts Jean-Louis Peaucelle and, more recently, Clayton Christensen (professor at Harvard) have clearly shown this. This lure of performance through technology, conveyed by the IT sector, only benefits itself: it is the world's largest economic sector and three of the five richest men on the planet run or has run companies digitally. On the other hand, our administration and our companies are far from having benefited from computerization. This is the famous "Solow Paradox". One must only cite the productivity losses linked to the arrival of office automation, e-mail or expensive ERP or CRM projects to be convinced of this. However, as demonstrated by the economist Angus Maddison, the industrial revolution made it possible to multiply by a factor of 10 the wealth per capita. The digital revolution will therefore only be successful if we French succeed in meeting this same challenge. The Scientific Organization of Work and all its variations (from "time and motion" to "Lean 6-Sigma" approaches) have largely contributed to the success of our industries. Thus, we propose to create a movement completely independent of the IT industry ("the producer") in charge of identifying and promoting the best managerial practices among our companies ("the users").

5. Resource Management Process

Good resource management is one of the main factors for project success. If the

plan doesn't have the features you need at the right time, it can lead to time, quality and, of course, budget issues (Ericksen, Crawford, Berke, & Dixon, 2001).

5.1. To Plan

This step involves defining how physical and human resources—control, acquisition, and management—are implemented in the project. Therefore, it will be easier to choose the best effort rate and method applicable to such activities. In addition, it identifies who is responsible for each task related to resource management or who can make the best decisions and direct operations. One of the biggest advantages of documenting these elements is the ability to articulate expectations for resource management. In this way, management is clearer and possible confusion or misunderstandings can be reduced.

Estimate Activity Resources

The estimation step involves analyzing the quantity and characteristics of the physical or human resources needed to complete the project. This process is usually repeated several times during execution. For this, several methods can be used, such as bottom-up, analogous estimation and parameter estimation. Resource estimates largely depend on the type of project implemented. Therefore, prior knowledge of local regulations is usually required. For example, housing construction projects require managers to be more knowledgeable about civil and environmental laws. By building a resource allocation structure it is possible to better visualize these numbers. It is a hierarchical representation with the possibility of systematizing and listing resources according to predetermined categories, that is, according to measurable possibilities.

5.2. Acquire Resources

Here is the time to receive the physical and human resources necessary to complete the project. In this sense, resources can be raised in two ways: internally and externally. The company's internal resources already exist—available through coordination or negotiation between managers from different areas. External resources, on the other hand, must be obtained through a formal procurement procedure, which requires researching suppliers, receiving recommendations, and executing contracts. The acquisition of these resources is monitored through documentation in its own calendar, which is responsible for determining the period of availability of each project. This measure brings more agility and organization to decision making.

5.2.1. Develop the Team

Team building in project resource management refers to improving the skills of employees. In fact, it is the responsibility of managers to promote corporate education and contribute to improving the technical knowledge or self-confidence of employees. The objective is to invest in knowledge through workshops, courses, and lectures to give more motivation to your team.

5.2.2. Manage Collaborators and Teams

The management team is designed to understand employee performance, troubleshoot issues, provide feedback, and drive changes to improve project performance. The organizational structure based on projects gives the project manager more autonomy to manage his team, in the matrix structure, especially in the functional structure, the project manager has little autonomy.

5.3. Control These Features

This is the method of ensuring that resources allocated and assigned to the project are available as planned and monitoring planned resource utilization, actual utilization, and corrective actions as needed. The main benefit of this process is ensuring that resources are available to the project at the right time and place and released when they are no longer needed.

If possible, meet with key project stakeholders to adjust project time and resources. This will give you a better understanding of the project plan and help you identify the best resources for the job. As we mentioned earlier, resources in an asset management plan can include staffing equipment, budget, software, or staffing capacity. A management plan needs to determine what types of resources are needed to indicate what resources are available. Also, if the team uses a work management tool to manage a project, it is clear what everyone is doing, which makes it easier to identify who should be assigned to the project. Depending on the scope of the project, it may be necessary to balance resources and prioritize other work to avoid overwhelming team members. Thus, the resource manager can be in constant contact with the team throughout the life of the project. It's important to explain to everyone that you support them, and more importantly, understanding what they have on hand is a great way to show ongoing support for your team. Several tools can be used to create resource management plans, including spreadsheets that can be used to track resource usage and availability. However, the best resource management tools are the ones that act as an information and reference hub for your team.

5.4. Importance of Resource Management Plan for Company

Resource management plays an important role in improving the profitability and sustainability of a business. Managers can leverage low-cost global resources in low-cost environments because of full enterprise visibility. Correctly allocating resources to the right projects allows them to complete tasks on time and on budget. In addition, resource management helps managers predict workforce utilization. In this way, resources can be moved from unbilled work to strategic billed work (Legge, 1995). Demand estimation is also possible thanks to this management, so that managers can anticipate resource needs. This allows them to develop action plans that proactively close the gap between capacity and demand. This process ensures the transparency of communication and thus facilitates the effective sharing of highly qualified resources in the matrix organization. Scarce resources can be used for different projects instead of high priority

projects. The shared services model will also be distributed across geographies for 24/7 support operations. Additionally, undeveloped employees may feel unmotivated and lacking opportunities for career development, which will primarily lead to engagement, productivity, and unplanned burnout. That said, regularly monitoring their skills and performance helps them improve and add more value to the organization.

5.5. Implication of Resource Management for a Company

The optimization of company resources allows for a more efficient use of physical, human, and financial resources. This hampers losses and eliminates activities that are not necessary. As a result, the speed and productivity of business processes increases and expenses equate to efficiency. Furthermore, by better controlling their behavior, companies will be able to increase profits. All because it will strategically increase your productivity and reduce costs. To better allocate team resources, it is necessary to first understand the objectives and goals of the project. In other words, you need to determine what the project will be about, be it an article or a more detailed campaign, and what metrics will be used to measure the success of the project.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

- Akkaya, B., & Tabak, A. (2020). The Link between Organizational Agility and Leadership: A Research in Science Parks. *Academy of Strategic Management Journal*, 19, 1-17.
- Autissier, D., & Moutot, J.-M. (2015). De la conduite du changement-instrumentalisée au changement agile. *Question(s) de Management*, No. 2, 37-44.
<https://doi.org/10.3917/qdm.152.0037>
- Blake, R., & Mouton, J. (1964). *The Managerial Grid: The Key to Leadership Excellence*. Gulf Publishing Company.
- Boboc, R. G., Duguleană, M., Voinea, G.-D., Postelnicu, C.-C., Popovici, D.-M., & Carrozzino, M. (2019). Mobile Augmented Reality for Cultural Heritage: Following the Footsteps of Ovid among Different Locations in Europe. *Sustainability*, 11, Article No. 1167. <https://doi.org/10.3390/su11041167>
- Czakert, J. P., & Berger, R. (2022). The Indirect Role of Passive-Avoidant and Transformational Leadership through Job and Team Level Stressors on Workplace cyberbullying. *International Journal of Environmental Research and Public Health*, 19, 15984. <https://doi.org/10.3390/ijerph192315984>
- Davies, P., & Tidey, A. (2020). *Coronavirus Job Cuts: Which Companies in Europe Are Slashing Their Workforces Because of COVID-19?* Euronews.
- Drucker, P. (1954). *The Practice of Management*. Harper and Row.
- Ericksen, N., Crawford, J., Berke, P., & Dixon, J. (2001). *Resource Management, Plan Quality and Governance: A Report to Government*. International Global Change Institute, University of Waikato.

- Europe Cloud Computing Market Size & Share | Growth Trends 2032* (2022). <https://www.gminsights.com/industry-analysis/europe-cloud-computing-market>
- Galambaud, B. (2010). Company Executives: A Possible New Social Group. In F. Bournois, J. Duval-Hamel, S. Roussillon, & J.-L. Scaringella (Eds.), *Handbook of Top Management Teams* (pp. 79-96). Palgrave Macmillan. https://doi.org/10.1057/9780230305335_9
- Hofmann, P., Samp, C., & Urbach, N. (2020). Robotic Process Automation. *Electronic Markets*, 30, 99-106. <https://doi.org/10.1007/s12525-019-00365-8>
- Kim, J., & Yoo, J. (2019). Science and Technology Policy Research in the EU: From Framework Programme to HORIZON 2020. *Social Sciences*, 8, Article No. 153. <https://doi.org/10.3390/socsci8050153>
- Kotter, J. P. (1990). *A Force for Change: How Leadership Differs from Management*. Free Press.
- Kumar, A., & Ting, P. (2019). *RFID & Analytics Driving Agility in Apparel Supply Chain*. https://dspace.mit.edu/bitstream/handle/1721.1/121286/Kumar_Ting_2019.pdf?sequence=1&isAllowed=y
- Laguna-Salvadó, L., Lauras, M., Okongwu, U., & Comes, T. (2019). A Multicriteria Master Planning DSS for a Sustainable Humanitarian Supply Chain. *Annals of Operations Research*, 283, 1303-1343. <https://doi.org/10.1007/s10479-018-2882-3>
- Legge, K. (1995). What Is Human Resource Management? In *Human Resource Management. Management, Work and Organisations* (pp. 62-95). Palgrave. https://doi.org/10.1007/978-1-349-24156-9_3
- Lewin, K. (1935). *A Dynamic Theory of Personality*. McGraw-Hill.
- Likert, R. (1961). *New Patterns of Management*. McGraw-Hill.
- Liman, A., & Weber, K. (2023). Quantum Computing: Bridging the National Security-Digital Sovereignty Divide. *European Journal of Risk Regulation*, 1-8. <https://doi.org/10.1017/err.2023.44>
- Macassa, G., McGrath, C., Tomaselli, G., & Buttigieg, S. C. (2021). Corporate Social Responsibility and Internal Stakeholders' Health and Well-Being in Europe: A Systematic Descriptive Review. *Health Promotion International*, 36, 866-883. <https://doi.org/10.1093/heapro/daaa071>
- Mintzberg, H. (1973). Strategy-Making in Three Modes. *California Management Review*, 16, 44-53. <https://doi.org/10.2307/41164491>
- Modgil, S., Gupta, S., Stekelorum, R., & Laguir, I. (2021). AI Technologies and Their Impact on Supply Chain Resilience during COVID-19. *International Journal of Physical Distribution & Logistics Management*, 52, 130-149. <https://doi.org/10.1108/IJPDLM-12-2020-0434>
- Niemeier, S., Zocchi, A., & Catena, M. (2013). *Reshaping Retail: Why Technology Is Transforming the Industry and How to Win in the New Consumer Driven World*. John Wiley & Sons. <https://doi.org/10.1002/9781119207979>
- Noguera, F., & Plane, J.-M. (2016). *Le Leadership: Recherches et Pratiques*. Vuibert. <https://doi.org/10.3917/vuib.agrh.2016.01>
- O'Neil, S. K. (2021). *Protection without Protectionism: Getting Industrial Policy Right*. Foreign Affairs.
- Payre, S., & Scouarnec, A. (2015). Manager: Un métier en mutation? Essai de lecture rétrospective pour dessiner les contours du métier de manager et les accompagnements RH nécessaires. *Revue de Gestion des Ressources Humaines*, No. 3, 3-16. <https://doi.org/10.3917/grhu.097.0003>

- Plumpton, D. (2019). Cyber-Physical Systems, Internet of Things, and Big Data in Industry 4.0: Digital Manufacturing Technologies, Business Process Optimization, and Sustainable Organizational Performance. *Economics, Management, and Financial Markets*, 14, 23-29. <https://doi.org/10.22381/EMFM14320193>
- Politico (2019). *Mainstream Parties Block Euroskeptics from Top Parliament Posts*. <https://www.politico.eu/article/mainstream-parties-block-euroskeptics-from-top-parliament-posts/>
- Renda, A. (2021). The EU Industrial Strategy: Towards a Post-Growth Agenda? *Intereconomics*, 56, 133-138. <https://doi.org/10.1007/s10272-021-0968-7>
- SITSI (2020). *The Top 10 IT trends for 2020 (11)—Trend 10: Agile and DevOps Boost Flexibility*. <https://www.sitsi.com/top-10-it-trends-2020-11-trend-10-agile-and-devops-boost-flexibility>
- Sober, T. L. (2020). Identifying and Recruiting Quality Mentor Teachers. In C. A. Torrez, & M. Krebs (Eds.), *The Teacher Residency Model: Core Components for High Impact on Student Achievement* (pp. 31-59). Lexington Books.
- Sorbello, K. (2020). A Paradigm Shift in Management Philosophy: Future Challenges in Global Organizations. In B. Thakkar (Ed.), *Paradigm Shift in Management Philosophy: Future Challenges in Global Organizations* (pp. 13-36). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-29710-7_2