

Flexible Workplace: Benefits and Concerns in Facilities Management

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Abstract

Change in organization is inevitable. In a workplace, an office worker is relating to an organization in a new way. The growth of business and economy has highly influenced upon the increasing cost of real estate. Many companies cannot afford office space rent, which becomes the second highest cost of total expenses. Furthermore, changes in organizational work pattern, people lifestyle and technological development also influence upon new expectations of the office's physical environment. Through reviewing driving forces and a number of cases, potential benefits and concerns of flexible workplace are identified together with proposition of critical roles of facilities managers regarding the changing ways of working. This paper aims to examine the ways of achieving high performance workplace and the implication to facilities management in the context of flexible workplace.

บทคัดย่อ

ความเปลี่ยนแปลงในองค์กรเป็นสิ่งที่ไม่สามารถหลีกเลี่ยงได้ ปัจจุบันนี้พนักงานได้มีส่วนสัมพันธ์กับองค์กรในรูปแบบใหม่ ประกอบกับความเจริญเติบโตทางธุรกิจและเศรษฐกิจซึ่งมีอิทธิพลต่อการเพิ่มมูลค่าของอสังหาริมทรัพย์ ทำให้บริษัทหลายแห่งไม่สามารถรองรับค่าเช่าพื้นที่สำนักงานที่สูงขึ้น ซึ่งคิดเป็นค่าใช้จ่ายที่สูงเป็นอันดับที่สองของค่าใช้จ่ายในธุรกิจทั้งหมด นอกจากนี้ความเปลี่ยนแปลงในรูปแบบการทำงานขององค์กร รูปแบบการดำเนินชีวิต และความเจริญก้าวหน้าทางเทคโนโลยี ยังมีผลต่อความคาดหวังทางด้านสภาพแวดล้อมกายภาพในพื้นที่สำนักงาน บทความนี้ได้รวบรวมปัจจัยต่าง ๆ ที่เกี่ยวข้องกับสถานที่ทำงาน การศึกษาข้อมูลจากกรณีศึกษาและแนวคิดของความยืดหยุ่นในการใช้สถานที่ทำงาน รวมถึงบทบาทของผู้บริหารทรัพยากรอาคารในสภาพการทำงานปัจจุบัน ทั้งนี้ เพื่อตรวจสอบและหาแนวทางในการสร้างสรรค์สภาพแวดล้อมในการทำงาน และนัยสำคัญที่มีต่อการบริหารทรัพยากรอาคารในบริบทที่สัมพันธ์กับความยืดหยุ่นในการใช้สถานที่ทำงาน

Keywords (คำสำคัญ)

Organizational Culture (วัฒนธรรมองค์กร)

Information Technology (เทคโนโลยีสารสนเทศ)

Flexible Workplace (ความยืดหยุ่นในการใช้สถานที่ทำงาน)

Facilities Management (การบริหารทรัพยากรอาคาร)

1. Introduction

As the advent of information technology has been developed to be more dynamic in various sizes, forms and applications that involve in almost every process of office work, it is considered as a tool to help business operation to achieve value for money. Changes in information technology have influenced office work and office design. In addition, the development of information technology helps improving work performance in terms of speed, accuracy, and workloads. The nature of employment also changes from non-traditional working practices to a greater variety and flexibility in work patterns. In sociological context, changing in employment pattern, high cost of child care, expense and stress from traveling and the increasing number of small businesses are influential on the design and management of the workplace. Demographic change also involves issues of multinational and outsourced workforce that can work entirely almost anywhere. Paradigm shift and changes in technology associated with the changing nature of employment generate a holistic view of working in the future. Office organization in the future will become flatter structure

with a small number of core workers supported by the outsourced. Workplace is provided for diverse demands that placed upon the flexibility of the organization. As the term flexible workplace has been mentioned to provide solutions for an ever changing technology and the way people work, it should be noted that the consequences of the application vary from business to business. The main focus of this study is to examine flexible workplace in terms of potential benefits and area of concerns that are needed for the implementation of a high performance workplace.

2. Traditional Office: Shifting towards New Management Concepts

As the second most expensive resource, office space has evolved from cellular, open plan to non-territorial office and teleworking [1]. Traditional office can be described as an office that



Figure 1 Traditional Office

is influenced from Frederick Taylor's *Scientific Management*, which treats workers as a mechanism of production instead of self directed individuals [2]. Employees are concentrated in one place, isolated from an external environment and their home with high level of control and discipline. Similar to Scientific Management, the *Fordist* industrial system breaks a labor process down into detailed tasks according to highly specified time and motion analyses [3].

Traditional office assumes that:

- Office work is routine and undertaken largely by individuals working alone;
- Staff work at regular hours 5 days a week;
- Everyone has his/her own desk or office which he/she occupies all day;
- Most people are in the building during the course of the working day;
- The range of space standards and settings for office work is simple and hierarchical;
- Information technology is immobile.

In contrast, Peter Drucker uses the term knowledge workers to describe employees who carry knowledge as a powerful resource that become the major creators of wealth and jobs [4]. The success of the organization is dependent on the performance of its knowledge workforce. Consequently, the design of the workplace will have to respond to the needs of the workers.

3. Organizational Culture: Driver for Change in the Workplace

It is difficult to understand the impact of a workplace on an organization without examining the role of an organizational culture in the design and

use of the workplace. Organizational culture refers to a number of elements in a particular organization, for example expectations and assumptions of how good members should behave, common language and understanding about the meaning of words and events, major policies, symbolic meanings, basic assumptions about the way the world works, and commonly held values about what is worth doing and how it should be done [5]. To influence how the members think about themselves and their operating environment, the corporate culture embodies the organization's assumptions about how space is structured and the relations between staff and management. Generally, the amount of space is allocated to individuals, groups or ranks within the organization that the higher positions, the larger of workspace will be provided. In flexible workplace, amount of space depends on a nature of work that required for specific situation rather than ranks and status.

The work setting is sometimes used as a tool to encourage in corporate culture. By changing layouts and technology, people can work easier in certain ways and more difficult in others. In some instances, this will affect the norms and expectations that people apply to one another.

4. Office Workforce: Expectation towards the Future

One of the most influential ideas of flexible working is originated from the book '*The age of unreason* [6].' Professor Charles Handy gave a prophetic future work in which full-time employment with one organization for an entire working life had ended, and less than half of the workforce would be in the proper full-time jobs. The organization would predominantly consist of a small core of

key people, managers, professionals and skilled technicians, a small dedicated workforce supplemented by an outsourced workforce and a flexible labor force, part-time and temporary workers who can be brought in as and when needed.

For the pace of change of office workforce, the Department of the Environment estimates that 50% of the total United Kingdom workforce is in the office-based, white-collar jobs. The 12.5 million employees work in approximately 200 million square meters of gross office space, which represents about 120 billion of capital investment [7]. In the United States, office workers constitute more than 55 % of the workforce, while representing 70% of the total United States payroll (over US\$ 1 trillion). The Bureau of Labor & Statistics states that the office workforce will grow to about 80% by the year 2000 [8].

Obviously, the office workforce is increasing both in the United Kingdom and the United States. To achieve value for money on the built assets, the approach to use less space and to achieve success in terms of efficiency and effectiveness is increasingly important for workplace design.

5. Alternative Officing

People experience the changes in the workplace in a way that they are employed flexibly, part time, on contract, annualized, and so on. Despite this concept, the nature of work has changed very little since the majority of workers still work in the office environment. Until now that technology is more effective and affordable, boundary of working location is blurred letting people to work freely. In 2004, a study conducted by the British Council for Offices, Britain's leading forum for the discussion and debate of issues affecting

the office sector, reveals that the office space is shaped by the following four key factors [9].

1. People: Future workforce and resulting economic success will be a key driving force for all aspects of office design in the future.
2. Location: Office location will remain important in the future, but specification and design will become a lot more important.
3. Management and work-styles: Management styles must adapt to fit a faster-moving, idea-based environment and cope with a more mobile workforce, as there will be an increase in the freelance 'knowledge worker' who will migrate from project to project.
4. Technology: Technology will be seen as an enabler not a driver of change.

Considering the four key factors, it is essential to understand the relationship of all factors and their impact on one another in order to develop an integrated system for a Learning Organization. Learning Organization is the term described as human beings cooperating in dynamic systems that are in a state of continuous adaptation and improvement. A Learning Organization is able to transform itself by acquiring new knowledge, skills, or behaviors. In successful Learning Organization, individual learning is continuous; knowledge is shared; and culture supports learning.

Unpredictable patterns of working will be the norm rather than the exception, as businesses focus upon responding to the individual needs of customers. World-wide on-line working will be common, hence the pattern of working day, week, month and year will vary for each individual. Trends in organizational structure that affect office work include the increase of cross functional team working, less hierarchical units and more focus on

customer needs. The organization is confronted with the time-based competition and has to drive out wasted time in the office as well as reducing wasted space. The implication is that office space will be used more intensively, with less emphasis on traditional long-term ownership of individual workplaces and emphasis on more flexible and shorter-term ownership of office space for the changing group of users.

Organizational structure with geographically dispersed locations and dispersed workforce allows the closer connection with customers. Many firms prefer to use the management term 'empowerment' in their business process. This term is defined as the high-performance involvement that companies break down into small units, and provide employees the satisfaction of ownership and responsibility. The implication is that office design and office location will be prompted by highly opinionated, intelligent, dispersed, and diverse users, leading to an increasing demand for smaller and less centralized

offices. Organizations are experimenting with new workplace strategies which exploit the new information technologies to meet their goals of reducing overhead costs while better serving customers needs. For example, these strategies include non-territorial offices and telework centers.

Trends in technology that integrate voice, data, and images that engage in networks and the web are increasingly more important for modern organization. For example, the Robert L. Preger Intelligent Workplace at Carnegie Mellon University demonstrates the advanced building systems and their integration for total building [10]. The workplace is designed for both interior system and engineering infrastructures that are 'plug and play' to ensure that furniture and space reconfigurations for individual productivity and creativity are matched by technology and environment reconfigurations for occupants' comfort and health. Implementing advances in organizational flexibility will require that all workplaces be reconfigurable on demand to ensure 'organizational flexibility' for varying team sizes - supporting collaboration and individual thinking for organizational productivity, creativity and innovation.



Figure 2 The Robert L. Preger Intelligent Workplace

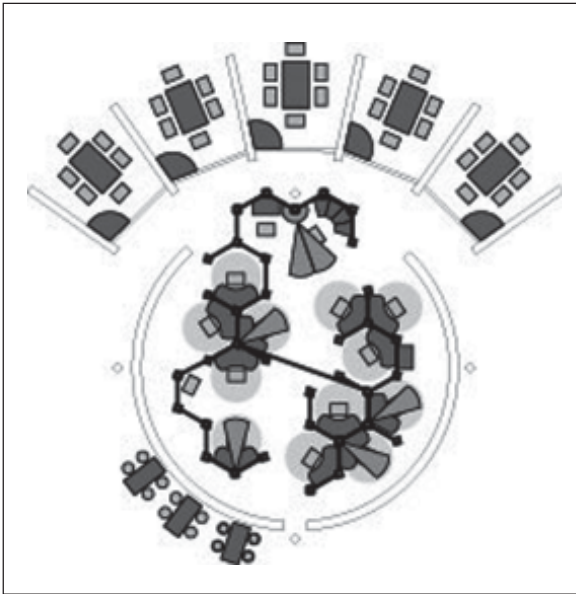


Figure 3 Resolve system: Herman Miller

Implementing advances in technological adaptability will require that vertical and horizontal pathways for connectivity are accessible and open including that both interior systems and servicing infrastructures such as HVAC, data, voice, video, power and controls, support changing technological demands.

High performance workplace depends on office design that integrates function, aesthetics, and psychological factors to support lifestyles and operational systems of today's changing work environment.

Nowadays, employees are beginning to expect considerable freedom at work even as they are being harnessed more frequently to teams that require intercommunication. Office layouts and furnishings that can be easily arranged for social interaction as well as self concentration are increasingly important. For example, a modular system of the Resolve furniture by Herman Miller allows office workers to adjust their workstations as require.

Many organizations that recognize these trends have developed a set of strategies with a goal to use workplaces, technologies, and work

processes as an integrated system. Various terms are used to describe workplace strategies. Generally, the alternative officing covers four main categories:

- Fixed address refers to open plan and cellular office;
- Shared address refers to hot desking, multi-task and non-territorial;
- Free address refers to teleworking, telecentres, homeworking and location independence;
- Virtual office, the workplace could be anywhere, anytime and any facility.

The four categories of alternative officing is relating to the way in which work and communication can be organized in space and time. First category of fixed address is more common in the traditional office that workers work in facilities in the same space and time. The shared address refers to the facilities that are arranged coincidently in space but not necessarily in time. Free address is provided to work coincidently in time, but not in space. The virtual office allows workers to work neither in the same space nor time [11].

Sun Microsystems, a leading IT service provider, has developed a system based on the alternative officing concept that is called iWork. The

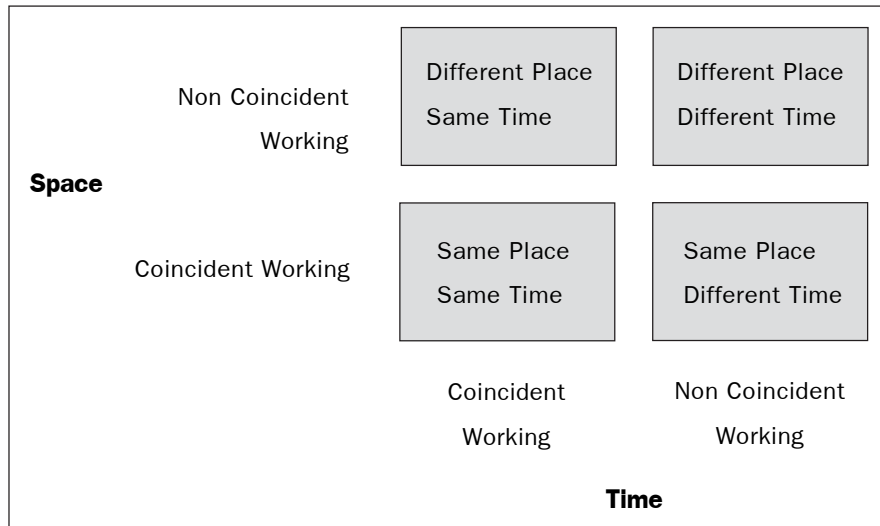


Figure 4 Work Organization in Space and Time



Figure 5 Virtual Office

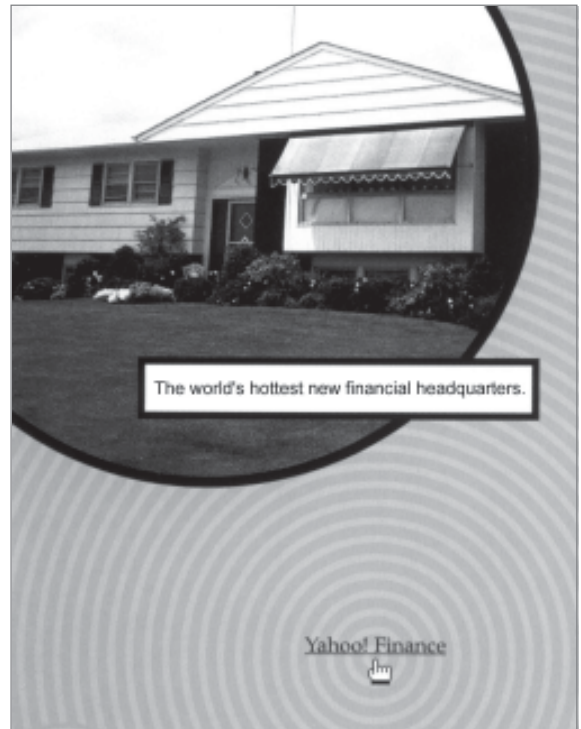


Figure 6 Working from Home

system combines work environment, technology and best work practices to allow employees to work as effectively and productively as possible, which include flexible offices and zones, drop-in centers, assigned offices, group collaborative workspaces and work from home [12].

Some academic institutions have been practicing a new approach of workplace strategies. The Space Morale and Remote Technology (SMART) program that had experimented at Cornell University aims to reduce the space requirement of an organization. The integrated information technology

has led to the change of requirements of the physical assets. In 1999, the Open University, the United Kingdom's only university dedicated to distance learning, launched its first course to be taught entirely via the internet, relying entirely on online tuition with no personal contact or residential schools. The students will be taught by means of a dedicated web site. Participants will have an e-mail access to individual tutors and will work in online teams for joint assignments [13].

6. The Potential Benefits of Flexible Workplace

Flexible working is associated with place flexibility, time flexibility and location variable. These changes affect facility requirements fundamentally. Potential benefits rely on level of flexibility that responds to the changing requirements of facility. Place flexibility refers to shared address that workstations are designed for the interchangeable users to help reduce churn rate. Churn is the proportion of occupants in an office who have to move or exchange their workplaces in a given year. Churn rates can be calculated as the number of offices that are reconfigured each year as a percentage of the total number of offices. In many large organizations, average churn rate is about 30 percent annually and may in some cases reach 70 percent or higher [14].

In 1993, IBM's churn rate in their headquarters was about 66 percent, i.e. approximately 2000 people moved out of 3000, and average of 40 people per week throughout the year [15]. The rate of churn can be higher than 100 percent implying that some employees move twice or more in one year. The high rate of churn is expensive because it involves in moving people, furniture and electronics.

Workstations for shared address are exactly the same and thus totally interchangeable, to fit-out schemes designed to ensure interchangeability of such components as partitions and furniture. Benefit of this idea is to accommodate change by driving out layout options.

Time flexibility refers to shared address and virtual office that allows office workers to choose available working time. Shift working and flexi-time is the distinct characteristics of flexible working. The allocation of workplace is depending on requirement of the workers. Flexible workplace allows office workers to have more time with family, reduce stress at work and have the ability to combine other activity with work. The outsourced workers can have more than one job and perform as a temporary worker in any organization. By 2004, Sun Microsystems had rolled out over 70 flexible office locations worldwide, supporting over half of the 35,000 employees, 2,000 employees registered in the work from home program, while 5,000 chose to use drop-in centers from time to time. Through its iWork solutions, Sun has saved 4,000 seats within its current portfolio and subsequently, real estate holdings have been reduced. Operating costs were cut by US \$71 million in 2002, and estimated to be US \$180 million as the program rolls out globally, with a further US \$2.8 million has been saved in power [16].

Physical obsolescence, ongoing maintenance and difficulty of change are key characteristics of physical resource. In a wide variety of transient technology and work patterns, the flexible use of space that provides choice of locations and responds to specific needs helps reducing overhead costs. Moreover, time and cost of transportation of workers could be greatly reduced. Advances in telecommunications and office automation,

transport and business infrastructure improvements, and international migration opportunities are seen as liberating influences on workplace location.

Flexible workplace reduces high rental cost of office space. Workplace density is measured by the intensity of building space used by its occupiers and indicates how much space each individual occupies within the workplace. High workplace density affects on both physical and psychological factors of the occupants that can be explained by Edward Hall's Proxemics theory. Theory of Proxemics describes about subjective dimensions that surround someone and the physical distances one tries to keep away from other people according to subtle cultural rules [17]. Generally, a high workplace density is not desirable for most people. Flexible workplace allows workers to connect to their office from a wider range of locations. Some solutions help reducing high density in the office, for example, working from home and virtual office.

There are benefits from flexible workplace that change concept of space requirements and space available. Launched in 1998, Standard Life deals with the insurance/assurance markets and using the telephone base sales service without single high street branch. For one year, this company has reached to one of the six largest banks in the UK and has a market share of the high-street banking market. Direct Line insurance company applies the same approach that has a small number of staff and operated by electronic and telephone system. It could reduce a lot of headcount cost burden and achieve value for money. Advantage of this approach is the lack of property overheads. There also has been a change in the built asset requirement such as Burton. Burton, a prominent fashion retailer in the UK, sold the high street property that changed from wholly-owned shops to

a sell and lease-back situation. Burton could move to a new shopping center, and left the out-of-date town positions with a minimum of cost to them [18].

So far, several forward-thinking companies in the United Kingdom have introduced teleworking schemes for significant numbers of employees. These include Bass, British Gas, BT, Cable & Wireless, Canon UK, Coca Cola/Schweppes, IBM, National Grid, Royal Bank of Scotland and Scottish widows. BT provided remote access capabilities to 15,000 staff including 2,000 home-based teleworkers. IBM supplied 13,000 staff with PCs, printers and fax machines so that they could work remotely. Hewlett-Packard is typical of the growing number of organizations equipping its mobile workers with a portable teleworking kit that includes laptop with modem, mobile telephone and even a mini video camera [19].

7. Disadvantages and Concerns for Applying the Flexible Workplace

Although there are a number of benefits of flexible working, the following cases demonstrate drawbacks in some conditions. A new building of British Airways, BA Waterside, has offered hot desking and cyber surfing. Only six months after the operation, the insiders at BA claimed that few of the 2,800 staff are satisfied with their radical offices and many have fallen back into traditional ways of working [20]. Despite the fact that the idea of flexible working allows workers to work from home, the workers may suffer from overwork and stress at home. The implication of technological advancement drives people to work at all hours and can subjugate rather than liberate. In contrast, some people may have the problem of 'fresh syndrome'



Figure 7 Time-at-task for 4 functional job types

that always performs the non-work activities. Furthermore, homeworking for more than about 50% of the working week can result in isolation and loss of team spirit [21].

Another concern is human psychology. Some people need something to inspire them such as pictures of family or something related to the mind. It is not convenient for them to move to different locations. According to a practice of flexible workplace, some policy requires for an empty workspace at the end of the day. In a real situation, to develop office policy that is more flexible is quite essential. Some professions do not have to spend much time in the office. Figure 7 demonstrates various types of works that associated in time spent in the office. Engineers and professionals need to spend time for chores and lab work that differ from managers that spend much time for the quiet work and in a meeting room.

Several key risks for individual workers when introducing more flexible patterns of work

include lower control over tasks, intensification of work, insecurity, conflict over new work roles, a sense of unfairness and violation and a lack of appropriate skills [22]. Office space should be arranged on an as-needed basis, and provide more for the shared space and team-based working. The organization has to develop a proper attitude for changing in corporate culture while maintains the motivation and loyalty for people who work diversely in multi-location and multi-time.

The debate about potential benefits and risks of the changes in office design and management is ongoing. Information Technology is one of the main drivers for organizational changes that impact on new strategies of workplace design. The major concerns of technology raise two important questions. The first question is how to prepare for the level of technology responding to patterns of change in function and market condition. Another question is the life of embedded technology and how it can be adjusted or upgraded in the future.

These questions relate to the risks of ‘over’ or ‘under’ specifying the level of technology to be incorporated within any specific development. The selection of an appropriate high tech, low tech or hybrid strategy is essential.

8. Roles of Facilities Manager

Obviously, technology has driven the change in many aspects of the office work. Practically, technology is not a key factor in changing of a working lifestyle, but rather a human factor is the key force. Greater occupant’s satisfaction usually means improved productivity. A facilities manager will need to consider human behavior that is affected by the changing of physical work environment. Facilities management on the flexible workplace issue will need to focus on workplace performance for both operational and administrative roles. Operational role of facilities manager is to concern about the day to day operations that aims to support new ways of working. Administrative role is proactive approach to business performance that leads to long term business goals. Efficient management of property is the major task that a facilities manager has to deliver to clients, especially for service level agreement (SLA) that ensures an acceptable level of performance they will receive.

Performance measurement of space is an essential skill for facilities manager that concerns about the effective space planning, effective allocation of space and effective of space utilization. A facilities manager has to know the process of post occupancy evaluation (POE) that focuses on an assessment of occupant’s satisfaction and functional fit with a specific space. To achieve value for money, a facilities manager not only has to control

the right balance between service requirement, delivered standards and resource efficiency, but also has to coordinate people with various types of work and combine the level of operation and cross function to work together.

9. Conclusion

This paper initiates a comprehensive investigation of flexible workplace by approaching various issues that are critical to the development of a high performance workplace. The management of technologies and application of flexible workplace will provide solutions for a high cost of space. Organizational strategies on workplace should not concentrate merely on emerging new technology, design theme or physical layout, but rather a breakthrough thinking of what office design is for.

There is no typical approach for developing new ways of working. Facilities management in the context of flexible workplace involves relationship of building users, facility conditions and the changing business needs. The right strategies on organizational structure, work process and work setting that reflect value and attitude of the occupants is depending on different conditions of individual organization.

Potential benefits and concerns of flexible workplace should be considered in terms of efficiency and effectiveness. A facilities manager is engaged in operational, administrative and integrative roles. As equally important is the development of assessment tool to monitor and maintain the level of workplace performance. Further study may address the significant problems of a particular type of organization such as performance measurement of academic institution as well as analysis of business strategies that are involved.

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