

## MODERN PRINCIPLES OF ORGANIZATION OF "OPEN SPACE" AREAS

Y. Shlyakhtich<sup>1</sup> , T. Kisselyova<sup>2,\*</sup> 

<sup>1</sup> Kazakh Agrotechnical University named after S. Seifullin, 010011, Astana, Kazakhstan

<sup>2</sup> Astana International University, 010000, Astana, Kazakhstan

---

**Abstract.** *Due to modern requests and need to improve spatial characteristics, a popular form of a workspace called "open space" requires a detailed analysis and consideration of transformation ways using architectural and planning solutions. This article presents a brief overview and systematization of office "open spaces" and an experience in scientific and design developments, which allows to generalize the organization principles of a theoretical model of "open spaces". The research data consists of analytical and in-situation analysis based on materials collected by the authors. The article analyzes the advantages and disadvantages of this kind of organization of a workspace. The prospects for its development are related to creation of a working environment as a tool to ensure the effectiveness of a modern company. The increase of the intellectual part of work has led the search for ergonomic office spaces to optimal working conditions, and then to the formation of an office environment towards a qualitatively new organizational model – “work-home-leisure-food places”. Research has shown that the transformation of open spaces nowadays is a result of objective factors of change in working relations. An integral characteristic of such a space currently is the requirement to workspaces for ergonomics, humanity, and facilitating of internal and external communication. The conducted research for improvement of open workspaces allows us to identify a number of necessary aspects, implementation of which guarantees a stable and demanded form of "open spaces" in the future. Recommendations are given taking into account different factors when organizing such spaces in the future.*

**Keywords:** *open space, office landscape, flexible planning, corporate organizational structure, architectural and compositional expressiveness, functional integration.*

---

**\*Corresponding author**

Tatyana Kisselyova, e-mail: [archi\\_tak@mail.ru](mailto:archi_tak@mail.ru)

<https://doi.org/10.51488/1680-080X/2025.2-03>

Received 11 February 2025; Revised 03 April 2025; Accepted 30 May 2025

## «OPEN SPACE» КЕҢІСТІГІН ҰЙЫМДАСТЫРУДЫҢ ЗАМАНАУИ ПРИНЦИПТЕРІ

Е.В. Шляхтич<sup>1</sup>  Т.А. Киселева<sup>2,\*</sup> 

<sup>1</sup> С. Сейфуллин атындағы Қазақ агротехникалық университеті, 010011, Астана, Қазақстан

<sup>2</sup> Астана Халықаралық университеті, 010000, Астана, Қазақстан

**Аннотация.** "Open space" жұмыс кеңістігін ұйымдастырудың кең таралған түрі, заманауи сұраныстардың өзгеруіне байланысты және кеңістіктік сипаттамаларды жақсарту мақсатында сәулеттік-жоспарлау шешімдері арқылы трансформация мүмкіндіктерін егжей-тегжейлі талдауды және қарастыруды қажет етеді. Бұл жұмыста "open space" кеңсе кеңістігіне қысқаша шолу және жүйелеу, "open space" ашық кеңістіктердің теориялық моделін ұйымдастыру принциптерін жалпылауға мүмкіндік беретін ғылыми және жобалық әзірлемелер тәжірибесі ұсынылған. Бұл зерттеулер авторлар жинаған нақты материалға негізделген аналитикалық және табиғи талдаулардан тұрады. Мақалада мұндай кеңістікті ұйымдастырудың артықшылықтары мен кемшіліктері талданады. Олардың даму перспективалары қазіргі заманғы компания қызметінің тиімділігін қамтамасыз ететін құрал ретінде жұмыс ортасын құрумен байланысты. Еңбектің интеллектуалды компонентін кеңейту эргономикалық кеңсе кеңістігін іздеуді оңтайлы жұмыс жағдайына бағыттады, бұл кеңсе ортасының қалыптасуын сапалы жаңа ұйымдастырушылық модельге – "жұмыс-үй-демалыс-тамақтану" әкелді. Зерттеулер көрсеткендей, қазіргі уақытта болып жатқан ашық кеңістіктердің өзгеруі өндірістік қатынастардың өзгеруінің объективті факторларына байланысты. Қазіргі кезеңдегі мұндай ортаның ажырамас сипаттамасы кеңістіктің эргономикаға, адамгершілікке, ішкі және сыртқы коммуникацияны қамтамасыз етуге ұмтылуы болып табылады. Ашық жұмыс кеңістігін жақсартуды жалпылау бірқатар қажетті аспектілерді бөліп көрсетуге мүмкіндік береді, оларды жүзеге асыру "open space" тұрақты және сұранысқа ие формасына кепілдік береді. болашақта. Болашақта осындай кеңістіктерді ұйымдастыруда қосымша факторларды есепке алу бойынша ұсыныстар берілді.

**Түйін сөздер:** "open space" ("open space"), "кеңсе ландшафты", орналасу икемділігі, корпоративтік ұйымдық құрылым, сәулеттік-композициялық экспрессивтілік, функционалдық интеграция.

\*Автор-корреспондент

Татьяна Киселева, e-mail: archi\_tak@mail.ru

<https://doi.org/10.51488/1680-080X/2025.2-03>

Алынды 11 ақпан 2025; Қайта қаралды 03 сәуір 2025; Қабылданды 30 мамыр 2025

## СОВРЕМЕННЫЕ ПРИНЦИПЫ ОРГАНИЗАЦИИ ПРОСТРАНСТВ «OPEN SPACE»

Е.В. Шляхтич<sup>1</sup>  Т.А. Киселева<sup>2,\*</sup> 

<sup>1</sup>Казахский агротехнический университет им. С. Сейфуллина, 010011, Астана, Казахстан

<sup>2</sup>Международный университет Астана, 010000, Астана, Казахстан

**Аннотация.** Широко распространенная форма организации рабочего пространства «open space», в связи с изменениями современных запросов и с целью улучшения пространственных характеристик, требует детального анализа и рассмотрения возможностей трансформации с помощью архитектурно-планировочных решений. В данной работе представлен краткий обзор и систематизация офисных пространств «open space», опыт научных и проектных разработок, позволяющий обобщить принципы организации теоретической модели открытых пространств «open space». Данные исследования складываются из аналитического и натурного анализа, базирующегося на фактическом материале, собранном авторами. В статье проанализированы преимущества и недостатки такой организации пространства. Расширение интеллектуальной составляющей труда направило поиски эргономичных офисных пространств к оптимальным условиям работы, что привело формирование офисной среды к качественно новой организационной модели – «работа-дом-досуг-общепит». Исследования показали, что трансформация открытых пространств, происходящая в данный момент времени обусловлена объективными факторами изменения производственных отношений. Неотъемлемой характеристикой такой среды на современном этапе является стремление пространства к эргономичности, гуманности, обеспечению внутренней и внешней коммуникации. Проведенные обобщения усовершенствования открытых рабочих пространств позволяют выделить ряд необходимых аспектов, реализация которых гарантирует устойчивую и востребованную форму «open space» в перспективе. Даны рекомендации по учету дополнительных факторов при организации подобных пространств в будущем.

**Ключевые слова:** «open space» (open спейс), «офисный ландшафт», гибкость планировки, корпоративная организационная структура, архитектурно-композиционная выразительность, функциональная интеграция.

**\*Автор-корреспондент**

Татьяна Киселева, e-mail: [archi\\_tak@mail.ru](mailto:archi_tak@mail.ru)

<https://doi.org/10.51488/1680-080X/2025.2-03>

Поступила 11 февраля 2025; Пересмотрено 03 апреля 2025; Принято 30 мая 2025

**ACKNOWLEDGEMENTS / SOURCE OF FUNDING**

The study was conducted using private sources of funding.

**CONFLICT OF INTEREST**

The authors state that there is no conflict of interest.

---

**АЛҒЫС / ҚАРЖЫЛАНДЫРУ КӨЗІ**

Зерттеу жеке қаржыландыру көздерін пайдалана отырып жүргізілді.

**МҮДДЕЛЕР ҚАҚТЫҒЫСЫ**

Авторлар мүдделер қақтығысы жоқ деп мәлімдейді.

---

**БЛАГОДАРНОСТИ / ИСТОЧНИК ФИНАНСИРОВАНИЯ**

Исследование проводилось с использованием частных источников финансирования.

**КОНФЛИКТ ИНТЕРЕСОВ**

Авторы заявляют, что конфликта интересов нет.

## 1 INTRODUCTION

Many forms of social coexistence in our lives have a collective beginning, starting from childhood. Kindergarten, school, and university give us skills of social and collective activity and social coexistence. A person is a social being and can realize himself only in society because he or she needs to create and do something meaningful and useful for society. Therefore, when such a form of workplace organization as "open space" appeared, it seemed quite organic for teamwork and was perceived as a solution to many economic and social problems. But does such a space meet the needs of modern person? How does open space affect a person's psychological state, how does it allow us to preserve our individuality? These issues require detailed consideration.

Besides that, it should be taken into account that, in accordance with the principle of functional integration, in the modern world, the workflow is carried out not only in the workplace, but also in public places, cafes, transport, etc., which is possible due to the appropriate level of communication and technical means. Therefore, the office environment in progressive companies, at the present stage, is not created from the position of accommodating the maximum number of employees, but is focused on creating the most comfortable working conditions and combining various functional elements into a single interconnected organism.

## 2 LITERATURE REVIEW

The open organization of the workspace was analyzed theoretically and applied practically at the beginning of the 20th century by such architects as F.L. Wright – the Larkin building in New York. The building is described in the book "The Complete 1925 Wendingen Series" by F.L. Wright and F.A. Davis. (**Wright, & Davis, 1992**).

Another great architect, Ludwig Mies van der Rohe (Seagram office building in New York), contributed to the formation of the modern open space, which is described in the book "Building Seagram" by Phyllis Lambert (**Lambert, 2013**), as well as by the modern theorist A. Lange (**Lange, 2014**) - "The Dot-Com City: Silicon Valley Urbanism", etc.

The issues related to the new ideology of office space were considered in the theoretical works of D. Borodai, A. Borodai, & S. Borodai, (**Borodai, & Borodai, 2024**) D. Myerson (**Myerson, 2003**), D. Spath and R. Kern (**Spath, & Kern, 2003**) and other major architects.

Theoretical studies of the figurative, organizational, architectural and planning ideology of modern offices include the works of F. Duffy (**Duffy, 1997**), A. L. Gelfond (**Gelfond, 2003**).

At the same time, the complex issues of the formation of the architectural environment of "open spaces" insufficiently specified by national researchers. It is necessary to conduct an in-depth analysis of the architectural and planning organization of open office spaces as an architectural environment where intellectual activities take place and new forms of labor organization are continuously created, as well as to establish the principles of formation of modern highly efficient open office spaces associated with the values of society during the period of globalization.

## 3 MATERIALS AND METHODS

To achieve the purpose of the study, a two-stage method of information collection was applied:

- conducting an analysis of existing techniques for organizing workspace;

- collection of information through scientific sources, which are based on the study of all indirect and direct factors affecting the subject of research.

The study used the most characteristic planning techniques for organizing public space for each historical period, which had the greatest impact on the subsequent development of open space spaces, based on the characteristic methods of organizing social, business and labor activity in foreign countries of Europe and the United States.

Based on the analysis of specialized resources, including electronic archives and platforms, international peer-reviewed publications, the principal characteristics of the workplace organization were analyzed.

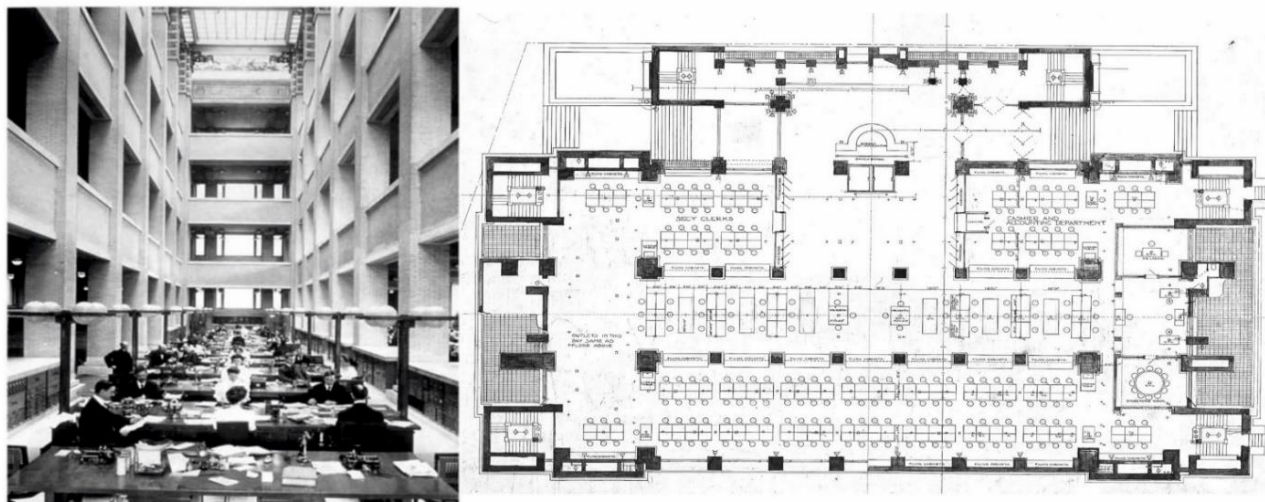
As a result, the analysis of existing methods of organizing open spaces, through a comprehensive study and systematization of current foreign design experience, a comparison of factors and an analytical review of reliable information, served as a theoretical basis for determining the ways of evolution and transformation of open spaces as a workplace organization in the era of the global process of increasing integration in the spheres of society.

## **4 RESULTS AND DISCUSSIONS**

Transformation to organization of workplaces as open spaces began at the end of the XIX century. This method of organizing the workspace began to be used not only for economical reasons, but also to create a psychological atmosphere of transparency and strengthen control over employees. The first office of a such kind appeared a hundred years ago in the "Victorian" era, when cast-iron ceilings were used in buildings to create large indoor spaces (**Wright, & Davis, 1992**). **Figure 1** shows an example of the first open office spaces, implemented by architect F.L. Wright in 1906, during the industrial revolution, in which the first office premises for clerks appeared, primarily serving commercial and banking transactions. At that time, such an organization was considered the most productive. In the 50s of the last century, a more advanced form was used in Germany, which was called "office landscape" because its desks were arranged at various angles in a haphazard manner, forming work areas of different sizes and configurations (**Lange, 2014**).

By the 2000-s, open space had reached the peak of its popularity. Representatives of "communicative" professions work in a common open space more often than others. These are brokers (20%), advertising, marketing and logistics managers (10% each), design engineers, architects (14%), credit specialists (13%), call center operators and translators (15% each). And the methods of organizing such spaces, for various reasons, require changes and unification.

One of these reasons is the transfer of staff work to a hybrid mode - a combination of "remote" and office work, in which it is possible to fill open spaces not 100% and this largely negates the negative effects of working in such a space, and also gives "dynamism" to workplaces. According to the survey, the majority of employers (73%) consider it optimal to spend 2-3 days a week in the office. But for this, it is important that the office is located close to home (61%), the availability of infrastructure for leisure (11%) and modern design (9%).



**Figure 1** – F.L. Wright office space in the Larkin Building in New York in 1906.  
(URL: <https://cyberpedia.su/3x86c.html>)

To date, there are several types of organization of open space offices:

1. Team-oriented principle, it implies that workplaces are grouped into teams to hear and see each other.
2. Hybrid space represents workplaces as arranged using partitions, when employees seat at their desks without seeing each other.
3. Cluster workspace is a group of workplaces with low partitions, fenced off by high partitions from other work teams. **Figure 2** shows an example of the organization of such a space.



**Figure 2** – The "open space" office of the 2000s. Cluster workspace: a group of workstations with low partitions. (URL: <https://investment-estate.com/en/novosti/kak-vyglyadit-novyy-centralnyy-ofis-robot-bosch-ukraine-v-kieve-foto>)

The use of the “open space” system for organizing the workspace offers both economic and social benefits because of the following reasons:

- saving space and materials due to the absence of the need for installing partitions and doors. Without these elements, engineering systems are more efficiently equipped, surface areas for partitions are not wasted;

- fast interaction of employees with each other. To solve operational issues, you do not need to go to the offices;

- simplified the process of monitoring the work of employees. Employees are at plain sight, therefore there is no opportunity to be distracted from work for a long time;

- democracy. Equality of all employees is ensured. Their statuses are equalized;

- maintaining the corporate spirit. A common space creates a unified working spirit.

The feeling of unity makes the team work more efficiently:

- simplification of document management. All documents are in the same space;

- effective use of office equipment.

But with the development of public relations, such a model of workplace organization is becoming morally obsolete. At the present stage, such spaces do not stand up to criticism in terms of primarily sanitary and epidemiological requirements (**Spath, & Kern, 2003**). **Figure 3** clearly shows all the negative aspects of the organization "open space" in the middle of the XIX century.



**Figure 3** – The "open space" office in the middle.

The team-oriented principle of space organization because everyone sees and hears each other.  
(URL: [https://twitter.com/habr\\_popsci/status/821326209149714432](https://twitter.com/habr_popsci/status/821326209149714432))

In a selective survey of open space employees, the following indicators were obtained:

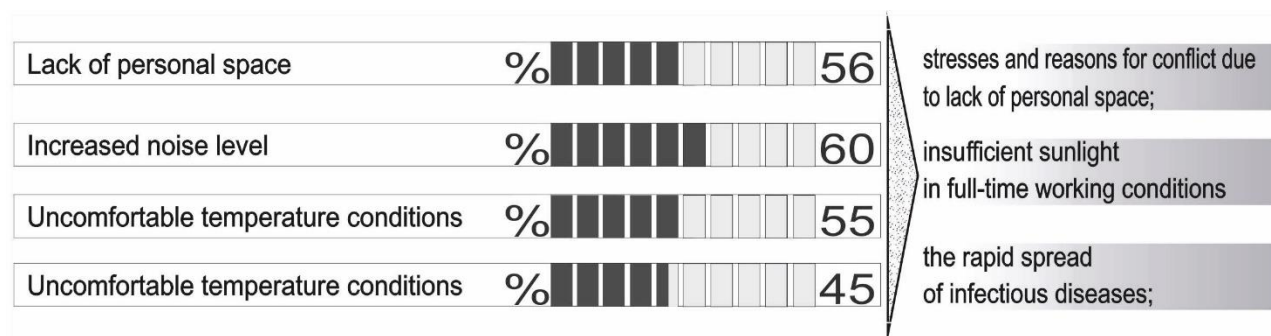
- 56% of employees claimed that they did not have enough personal space;
- 60% indicated an increased noise level;
- 55% were dissatisfied with the temperature regime of the room;
- 45% noted a lack of natural light.

Thus, the main and significant disadvantages of open spaces are:

- increased noise level;
- stress and reasons for conflict due to lack of personal space;
- insufficient sunlight in full-time working conditions;

- rapid spread of infectious diseases

The percentage of negative aspects was revealed through a survey of users of open spaces and is shown in **Figure 4**.



**Figure 4** – Analysis of negative indicators of the open space workspace (authors' material).

Nowadays, the question arises of the need to reduce the negative impact of these factors and, thereby, increase the productivity of work in open spaces. The improvement of the open workspace at the present stage is more important than ever, it is necessary to revive such spaces for their demand in the future. To determine the prospects for development, it is necessary to identify the main characteristic structural elements of such an environment and the features of their interaction with each other.

The workspace itself also needs to be transformed. Firstly, the spatial organization must be clearly visible; secondly, ergonomics must be achievable without compromising the psychological comfort of employees; thirdly, the office must comply with modern standards of working spaces (**Bantserova O. L. & Kasimova A. R., 2023**).

Based on the analysis of modern theoretical and practical developments, it is necessary to consider additional architectural and planning techniques and means for organizing open space that will enable a qualitative transformation of the workspace, specifically:

1. Due to the fact that each employee has their own individual needs, it is not recommended to standardize workplaces, but to use well-isolated modules.

2. Provide, properly position, and arrange nearby areas for eating, meeting rooms, and leisure spaces.

3. The meal room should be equipped with a kitchen, large, closed with doors for sound isolation and air-conditioning.

4. Avoidance of high partitions between workplaces. Such partitions visually reduce the space and work area of the employee, in the illusion of isolation, there is no silence.

5. Use of plants to create a friendly environment.

6. Control of area standard. At least 6.00 m<sup>2</sup> is provided for organization of the workplace per one employee, while the spatial organization must be clearly visible, the office must comply with modern standards of air exchange, light and sound level.

7. Availability of office equipment for staff. In the printing area should be equipped with noise isolation.

8. Convenient routes to move between tables to the meeting and leisure areas, as well as to the exit.

9. The use of sound-absorbing floor covering.

10. Dividing the entire open office space into noisy and quiet zones.

11. Providing places of active recreation with board games and exercise equipment.

12. Toilet cabins should be completely enclosed, with maximum insulation. The office should be equipped with shower cabins.

13. Providing soundproof spaces for telephone conversations - "telephone booths".

The above techniques will determine the relevance and development of open spaces in the future. **Figure 5** shows some examples of the transformation of the modern workspace.



**Figure 5** – Methods of organizing individual areas of the open space office nowadays.  
(URL: <http://milodamalo.ru/portfolio/tsup-avtovaz-open-space/>)  
(URL: <https://www.floornature.com/top-offices-and-work-spaces-12800/>)

The figure of the open space concept presented in **Figure 6** with a focus on future sustainability demonstrates the extent of the impact of using various techniques or design elements to achieve maximum psychological and physical comfort of employees and optimal business development.

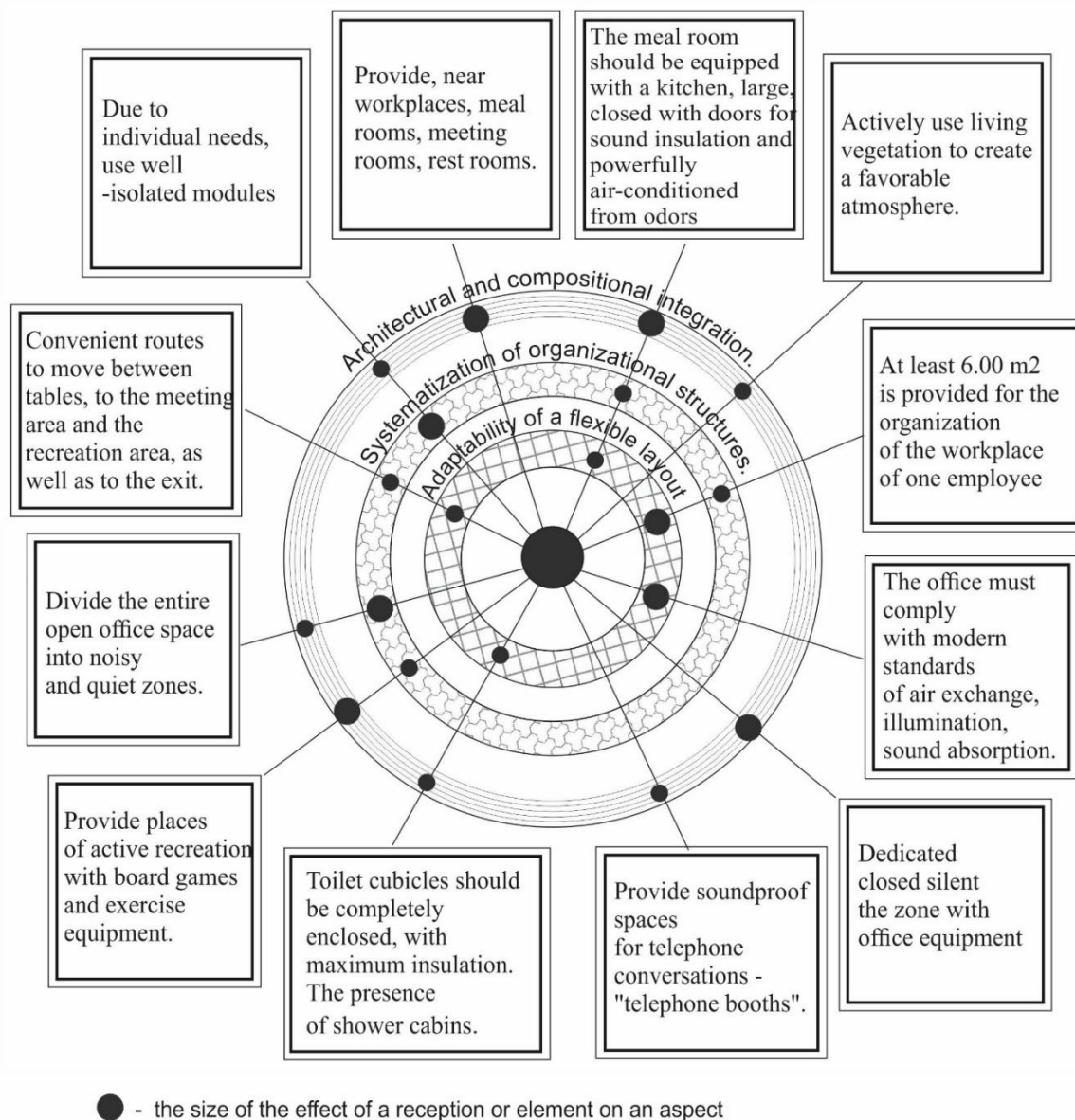


Figure 6 – The concept of organizing an open workplace [material by the authors]

## 5 CONCLUSIONS

To develop the communicative relevance of open spaces it is necessary to form a theoretical model of the organization of such a space through the definition of criteria for most optimal conditions. These criteria include:

1. *Adaptability of transformable design.* The ability to easily adapt the space to changing circumstances without stopping the work process. The workspace, as a systematically organized process, is constantly developing as well as the rules and conditions of labor organization.

2. *Systematization of the organizational structure.* The structure is responsible for two fundamental conditions, i.e. the division of labor into separate tasks and the coordination of actions to implement them. The success of the company is ensured by the interaction and exchange of information and knowledge among groups of employees and departments. A mandatory condition for the activity of a modern company is the close interaction of all its constituent elements, avoiding uncertainty and ensuring the diversity.

3. *Architectural and compositional integration.* Humanity, ensuring internal and external communication should become an integral characteristic of the communicative production environment at the present stage. In this case, "humanity" means creating the most comfortable

conditions for different groups of office workers, creating physical and psychological comfort for them. Such means include aesthetic comfort, which is achieved through such design techniques as well-chosen color, biophilic forms, and the scale of architectural and design elements to a person. The formation of an imaginative solution to the space should solve the tasks of self-identification of the company, informing, creating an aesthetic environment that initiates the work of an employee, perform a representative function, manifesting the status of the company in a material form.

The use of optimality criteria in organization of workplace will provide effective and sustainable forms leading to the decreasing the boundaries among work, home and leisure, which is a global trend in the modern world. Thus, the transformation of open spaces nowadays is due to objective changes in industrial relations.

## REFERENCES

1. **Wright, F. L., & Davis, F. A.** (1992). The Complete 1925 Wendingen Series. Dover Publications, Incorporated.
2. **Lambert, F.** (2013). Building Seagram. New Haven, Connecticut; London, England: Yale University Press.
3. **Lange, A.** (2014). Dotcom cities. The urbanism of Silicon Valley. London: Strelka Press.
4. **Borodai, D., Borodai, A., & Borodai, S.** (2024) Modern architectural and planning methods of designing business centers in the conditions of a big city. [Sovremennye arhitekturno-planirovochnye metody proektirovaniya biznes-centrov v usloviyah bol'shogo goroda]. Lviv: Scientific Journal "Bulletin of the National University of Lviv Polytechnic", 6(1), 24-33. <https://doi.org/10.23939/sa2024.01.024>
5. **Myerson, J.** (2003). The 21st Century Office. London: Laurence King Publishing.
6. **Spath, D., & Kern, P.** (2003). Office 21 Push for the future, Better performance in innovative working environments. Cologne-Stuttgart: Egmont vgs Verlagsgesellschaft mbH.
7. **Duffy, F., & Powell, K.** (1997). The New Office. London: Conrad Octopus.
8. **Gelfond, A. L.** (2003). Evolution of the business center. [Evoluciya biznes-centra]. Architecture construction design. 1(29). Retrieved from: [http://www.archjournal.ru/rus/1%20\(29\)%202003/evolution.htm](http://www.archjournal.ru/rus/1%20(29)%202003/evolution.htm) – (In Russ.).
9. **Myerson, J., & Ross, P.** (2022). Unworking. The Reinvention on the Modern Office. London: Reaktion Books.
10. **Bantserova, O. L., & Kasimova, A. R.** (2023). Bionic approach to the organization of architectural objects in the paradigm of sustainable development. [Bionicheskiy podhod k organizacii arhitekturnyh ob'ektov v paradigme ustojchivogo razvitiya]. Civil Engineering and Architecture, 11(2), 939 – 947. Retrieved from: <http://doi.org/10.13189/cea.2023.110230> – (In Russ).
11. **Grashka, Ya., & Churpek, Ya.** (2023). The practical implications of the EN 17037 minimum target daylight factor for building design and urban daylight in several European countries. Faculty of Civil Engineering, Slovak University of Technology, Bratislava 810 05, Slovakia, 10(1). <https://doi.org/10.1016/j.heliyon.2023.e23297>
12. **Jäger, S., Noy, S., & Schoefer, B.** (2022), The German Model of Industrial Relations: Balancing Flexibility and Collective Action. Pittsburgh, Pennsylvania: The Journal of Economic Perspectives, 36(4), 53-80. <https://www.jstor.org/stable/27171130>
13. **Janzer, C., & Weinstein, L.** (2014). Social Design and Neocolonialism. USA: Design and Culture Magazine, 6(3), 327–343. <https://doi.org/10.2752/175613114X14105155617429>
14. **Julier, G.** (2013). From Design Culture to Design Activism. USA: Design and Culture Magazine, 5(2), 215–236. <https://doi.org/10.2752/175470813X13638640370814>

15. **Dell'Era, C., Magistretti, S., Cautela, C., Verganti, R., & Zurlo, F.,** (2020). Four kinds of design thinking: From ideating to making, engaging, and criticizing. *Creativity and Innovation Management*, 29(2), 324-344. <https://doi.org/10.1111/CAIM.12353>
16. **Zhao, Z.** (2024) The New Roles and Significance of Public Open Spaces in Cities in the Post-pandemic Era. 5th International Conference on Mechanical Engineering, Civil Engineering and Material Engineering (MECEME 2024), 106. <https://doi.org/10.54097/fejk2g15>
17. **Nasution, A.D. Zahrah, W.** (2016) Public Open Space as Urban Architecture: Design and Public Life. Sepulu Nopember Institute of Technology: 8th International Conference on Architecture Research and Design (AR+DC) November 1-2, 11-20. <http://dx.doi.org/10.12962%2Fj23546026.y2017i3.2481>