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INFLUENCE OF CORPORATE SOCIAL NETWORKS ON THE INNOVATIVE RECEPTIVITY OF PERSONNEL, BY EXAMPLE OF *BITRIX24* SOFTWARE (*VO OVEN Ltd.*)

S&I

Introduction. Increasing the innovative receptivity (IR) of personnel using intra-corporate social networks (CSN) is a pressing problem.

Problem Statement. Currently, Ukraine is actively discussing the problems of digital transformations in the economy, as well as the importance of digital initiatives and research in this industry, as evidenced by the Conception for the development of the digital economy and society of Ukraine for 2018—2020 and a respective action plan for the implementation of this Conception (approved by the Cabinet of Ministers of Ukraine) adopted in January 2018. Theoretical and practical issues of analyzing the impact of intra-corporate communications in the CSN on the development of competencies and IR of employees have not been fully developed so far.

Purpose. To identify trends and effect of CSN on personnel IR by example of Bitrix24 software in VO OVEN Ltd.

Materials and Methods. Methods for comparative analysis of local and international CSN operation in Ukraine and throughout the world; analysis of the use of Bitrix24 software in the Ukrainian company.

Results. The ways to increase the IR of personnel using CSN and classic Internet portal have been shown. The CSN services in the system of corporate business tasks and their authentication with conventional human resources management system have been analyzed. The domains of effective CSN application in American corporations and in VO OVEN Ltd (Ukraine) have been compared. Data summary of Bitrix24 information messages (live news feed) in VO OVEN Ltd for 2017 and for the 1st quarter of 2018 has been given. Based on research results, a new HRMS function has been implemented to show the dataware of personnel and the realization of technical and economic processes for developing CSN under current conditions.

Conclusions. To ensure an adequate perception of digital technologies on industrial corporations, Ukraine needs highly qualified personnel with digital skills and competences. One of the options to develop these competences is to use CSN.

K e y w o r d s : innovative receptivity, corporate social networks, and Bitrix24.

Today, the topical issue of increasing the innovative receptivity (IR) of personnel is the use of in-house communications in corporate social networks (CSN) that are an information computer system based on special software systems. This creates a new communicative environment within the corporation based on the chosen system, which is designed to control receiving, analyzing, and transmitting information between its various subsystems and subjects (users). However, the theoretical and practical issues of analyzing the impact of in-house communications in the CSN on the development of competencies and IR of the personnel have not been fully developed. In order to enhance IR and to raise the efficiency of the personnel innovation activities, it is necessary to estimate the effectiveness and influence of intra-company communications on IR of structural units and individual employees.

As a means of solving this problem, a model for analyzing and developing the interrelated factors of IR of employees and managers based on their activity in the CSN has been considered. The use of in-house CSN enables to connect the information and operational capabilities of software and computer systems with the actual sets of information and communication relationships and interactions of corporation's employees. This makes it possible to speed up information flows, to quickly analyze relevant information, and to take necessary management procedures, which ultimately (due to a high speed of adaptive structuring, rapid processing, conversion, distribution, and feedback) enables to increase IR of both individual employees, specific departments, and corporation's staff as a whole [1].

In order to be able to use CSN for the sake of corporations and to establish their distinction from the Internet portals, the former has been classified in Table 1 below.

It is necessary to pay attention towards the CSN structure, purposes, and objectives for raising IR in terms of corporate governance and human resources management. Consequently, it is necessary to consider the services of corporate social applications in the context of addressing business tasks of the corporation (Table 2) [3].

In world practice, all types of the above mentioned local CSN have been used. The choice of certain types of networks dependi on tasks, scale, and nature of their use in the corporate information field of organizations. For example, in-house *Bitrix24* system is a universal portal for various applications, which enables to carry out a certain type of activity depending on the settings and customization. Its main features are strong project management, operations with files and docu-

Table 1

CSN Classification and Their Use Patterns [2]

CSN	Typical characteristics	Use patterns
Bitrix 24	Intranet with separate social module	The module contains functions for microblogging, messenger, photo gallery, etc. The interface and application functionality is a bit like social networks of the early 2000s. The social application is free, but it does not work until the basic package *Bitrix24* is purchased. The cost depends on the selected plan and the number of employees, as well as on the implementation option: the version for installation on the server costs higher than the cloud one
DaOffice	The first Russian corporate social network. As compared with *Bitrix24*, it is more concentrated on social tools	Microblogs support #tags and @names like *Twitter*; enables to "like" favorite posts, to see a list of recommended friends, like in *Facebook*. A distinctive feature is elements of gamification: for posting messages on relevant and useful topics, the employees score points. Access to *DaOffice* is possible from mobile devices using *Android* and *iOS* applications. The cost of installation is determined specifically for each company and depends on the *Team* version (a full-fledged corporation's own CSN) or *Enterprise* (maximum functionality for deep integration of social mechanics into the corporation's business processes), implementation options (server or cloud), the need for interoperability and additional options. The free version is available only for large companies (more than 250 employees). Restrictions on administration tools appear when installed on corporate server.
Jive	Intranet with social functions	Jive users can customize their individual workspace. The application contains tools for managing tasks, corporate content and projects. Jive is available for mobile devices and is interoperable with *Office365* and *Google* products. The cost depends on the package: *Select*, *Premier* or *Premier +*. A serious disadvantage is the lack of a Russified version. In addition, according to customer reviews, navigation in *Jive* is very different from the usual navigation in social networks

End of table 1

CSN	Typical characteristics	Use patterns
Yammer	The world most popular social Intranet	Available to users as part of *Office365*. The structure is similar to that of *Twitter*, allowing employees to share short messages, to form working groups and to monitor the "status" of subordinates. Other features of the service include exchanging files and images, supporting tags in messages, viewing online contacts, searching for people, groups and texts, creating and using the knowledge base. Support of 25 languages, no language barrier. Since *Yammer* became part of the *Office365* online office, it could not be installed separately. Another significant drawback is the lack of on premise option, only a cloud (off premise) solution with servers located abroad is available
Facebook Workplace	Corporate social network as it is	Very similar to the classic version of *Facebook*. At the same time, the user profiles are not linked to their FB accounts. The same tools, including news lines, personal profiles, groups, chats, presentations, video calls are available. The main advantage of *Facebook Workplace* is its familiar interface that does not require any retraining. The product is intended for large corporations, with its cost depending on the size of corporation. If the number of employees in a corporation is less than 1000 people, the cost is about USD 3 per employee; if it ranges between 1,000 and 10,000 people, the cost is USD 2. A free three-month trial period is provided. The main disadvantages are the lack of customization and on premise option. Only cloud version is available with servers located abroad
CyberCloud	Enables creating a full-fledge CSN with a complex functionality	Enables to create news, personal messages, shared files, a common knowledge base, forums, polls, tasks for managers and employees, a directory of users, idea collectors, blogs. A distinctive feature of the service is gamification. The network has a board of honor that is formed automatically based on various criteria – from useful advice to brilliant ideas and important publications for the corporation. The users can enter the social network using any device: computer, smartphone or tablet. The developers offer two versions: the cloud and the box system. The service is designed for large corporations; the monthly fee starts with USD 45 per 100 users. The main disadvantages are: only web version is available (no mobile application has been developed) and an obsolete design of the late 1990s

ments, user-friendly interface, and powerful communication system.

CSNs does not replace, but complement the existing electronic document management systems for approving, transmitting, and controlling the execution of orders, management, and financial accounting. They aim at solving problems and tasks beyond those established in existing corporate e-government systems. The figure shows how the corporate social network services correlate with business objectives on which they are focused and are identified with conventional human resources management systems (HRMS) (as compared with the subsystems of conventional HRMS).

Let us consider the use of *Bitrix24* software in *VO Oven* corporation. Table 3 shows the effectiveness of this service as compared with the US CSN [9].

The functions of conventional HRMS identified in Table 3: 2.1 — analysis and administration of group and personal relationships; 2.4 — socio-psychological diagnosis; 3.2 — information support of the HR management system; 3.4 — employment management; 4.8 — assessment of existing personnel; 5.1 — staff training; 5.4 — professional and socio-psychological adaptation of employees. The HRMS functions are described in more detail in [5—8].

Having analyzed the effective areas of CSN application in American corporations and at *VO OVEN* corporation, one can conclude that an increase in the performance indices of the personnel as a result of applying the CSN in the corporation is explained by accelerating the personnel communication:

✦ processing of information messages (reading and replying e-mail messages) (due to faster speed, and time reduction);
✦ search and collection of information at a faster speed;
✦ analysis, discussion, and communication while working together;

Table 2

Comparison of Capabilities in Terms of Raising Personnel IR Using CSN and Classical Internet Portal [4]

Classical Internet portal	CSN
Reflects a formal structure of corporation (not always), without informal links taken into consideration	Reflects real links in the organizational and managerial structure of corporation and personnel, which facilitates raising IR
The materials are published only by administrators	The materials are published by all employees, which forms a broader information field and contributes to raising IR
Selected content (only the most important information that has been reviewed) is posted	A large content forming a real framework of corporate knowledge is posted. This approach facilitates raising IR
Centralized structure, slow, sanctioned "from above" evolution	Decentralized structure and natural evolution, which facilitates raising IR
Top-down communications	Both top-down and bottom-up communications [4], which ensures a feedback and facilitates raising IR of the personnel and the corporation as a whole
Terms of development and launch from 2 weeks	Terms of development and launch from 2 weeks
Based on standard software like SharePoint	Based on both standard and dynamic multifunctional *SharePoint* or *WebTycoo*n
Costs from USD 4000	Costs from USD 5000
Low motivation of employees	High motivation of employees, which facilitates raising IR

Table 3

Comparison of Effective Areas of CSN Application in American Corporations and at *VO OVEN* Ltd.

Область применения	Correspondence to HRMS functions	Time inputs, % weekly		Increase in performance, %		Time saved, % weekly	
		AC	UC	AC	UC	AC	UC
Reading and replying messages	2.1	28	35	25—30	30—40	7.0—8.5	10.5—14
Searching and collecting data	2.4; 5.1	19	15	30—35	20—30	5.5—6.5	3.0—4.5
Communication and joint work	2.1; 3.1; 3.4; 4.8; 5.1; 5.4	14	10	25—35	10—15	3.5—5.0	1.0—1.5
Specific tasks	2.1; 3.1; 3.4; 5.1; 5.4	39	40	10—15	40—50	4.0—6.0	16.0—20.0
Total		100	100	20—25	30.5—40	20.0—25.0	30.5—40.0

Note: AC — CSN performance indicators based on outlook of American corporations; UC — data based on example of ukrainian corporation *VO OVEN* Ltd.

Marketing and promotion	Customer and supplier relations, processing of claims for replacement	NE
	Search and collection of information: product and service CoE with an option of interactive communication between all stakeholders	5.1 FI

Document flow and communication	Common electronic mail and sms-service	NE
	Formation of common content, libraries, knowledge basis by corporate business lines (saving of content of key personnel who have left the corporation)	5.1 FI
	Corporate communications, in-house PR, competitions, press, support programs, photo- and video reports, corporate TV, etc.	NE
	Joint work — seminars and workshops, forums, online conferences, etc.	5.1 PI

HR management	Employee work monitoring system, remote record of assignment execution	3.4 FI
	Adaptation of new employees, monitoring of employee and supervisor contacts	5.4 PI
	Employee personal profiles, information about corporation and employees in the structured form	3.4 FI 3.2 PI
	Personnel rating, appraisal of personnel performance, identification of the spheres of interest of employees, groups, and opinion leaders	4.8 PI 2.4 FI
	Feedback and monitoring of satisfaction, support and testing of modifications, identification of weak spots of the corporation	2.1 FI

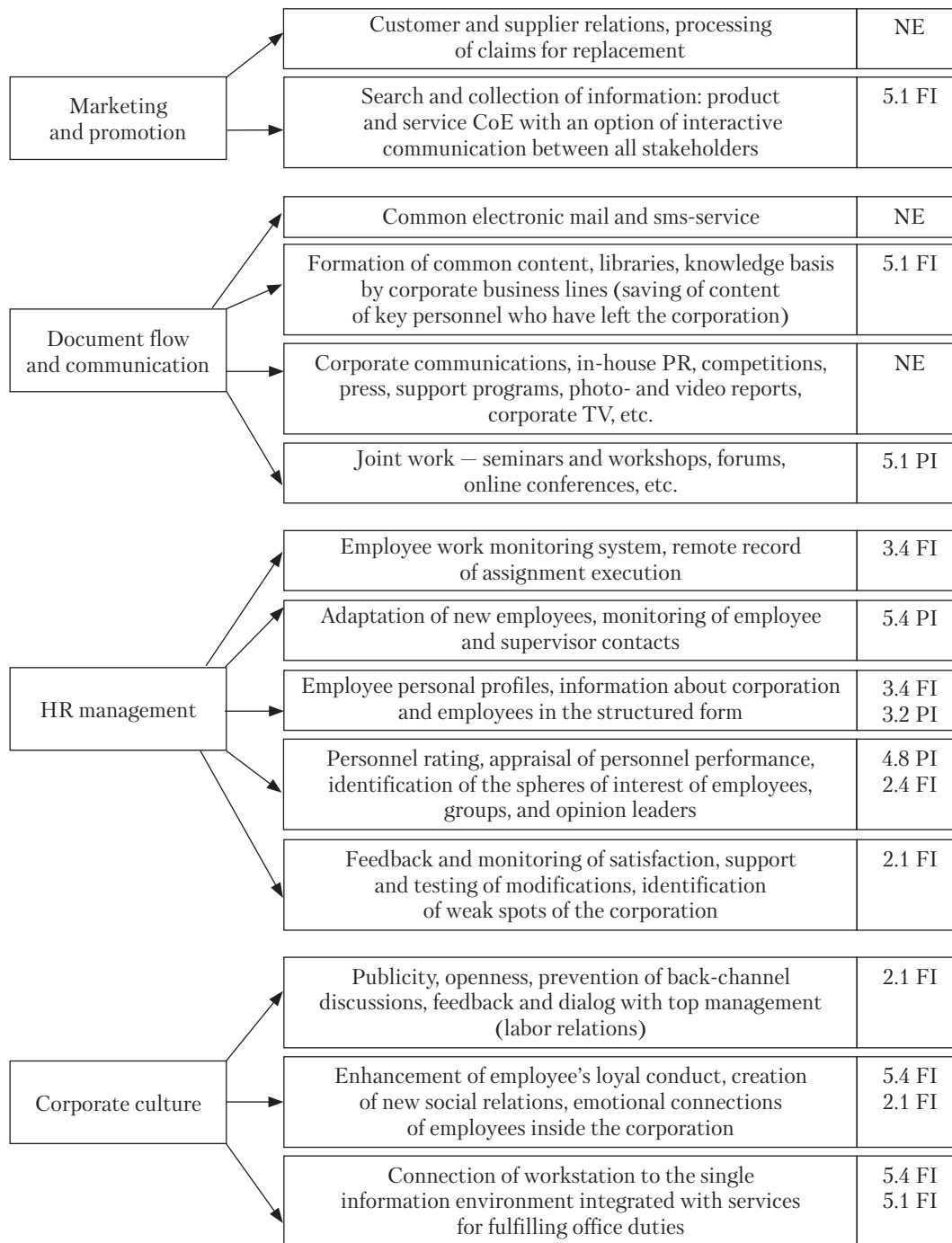|		
Corporate culture	Publicity, openness, prevention of back-channel discussions, feedback and dialog with top management (labor relations)	2.1 FI
	Enhancement of employee's loyal conduct, creation of new social relations, emotional connections of employees inside the corporation	5.4 FI 2.1 FI
	Connection of workstation to the single information environment integrated with services for fulfilling office duties	5.4 FI 5.1 FI

Fig. 1. CSN services in the corporation's system of business tasks and their identification with conventional HRMS: NE — not enclosed in the conventional HRMS subsystems and functions; NI — not interoperable with conventional HRMS subsystems and functions; PI — partially interoperable with conventional HRMS subsystems and functions; FI — fragmentally interoperable with conventional HRMS subsystems and functions; CI — completely interoperable with conventional HRMS subsystems and functions. The right column shows the levels of identification of *Bitrix24* software functions with conventional elements of HRMS of *VO OVEN* Ltd.

Table 4

**Summary of Information Messages
of Bitrix24 (Buzz) Software at VO Oven Ltd.
for 2017 for the 1st Quarter of 2018**

Number of HRMS function	HRMS functions	Number of messages, pcs	
		2017	1st quarter of 2018
3.1	Documenting and accounting	—	11
3.2	Information support of HR record keeping system	20	—
4.6	Connections to outsourcing agencies	2	—
5.1	Technical and economical training	9	15
5.2	Information support of HR, implementation of workflows	359	77
5.3	Management, planning, and control of professional life	—	1
6.2	Development of salary system	—	3
6.3	Labor incentive management	—	3
6.4	Development of forms of holding share in profit and capital	—	1
6.5	Use of forms of moral incentives	23	1
8.3	Development of culture and physical training	15	1
9.1	Analysis of organizational structure of management	24	6
9.2	Drafting and formation of new organizational structure	5	4
	Total	457	123

✦ increase in performance of teamwork (due to communication and teamwork;
✦ fulfillment of specific tasks.

A comparative analysis of the *Bitrix24* services with the conventional elements of *VO OVEN* corporation's HRMS has showed that there is a lack of interoperability between the services and the integrated HRMS; some subsystems and functions do not actually support the corresponding services because the CSN is designed for a general purpose of improving the HRMS systems and realizing its subsystems and functions.

Information messages of *Bitrix24* CSN of *VO OVEN* Ltd. for 2017 and in more detail for the first quarter of 2018 have been analyzed in order to form a material for analyzing the implementation of the HRMS system in this CSN (Table 4).

Having analyzed summary data of Table 4, one can conclude that buzz information messages do not sufficiently cover the functions of the HRMS subsystem. Most of these messages are related to workflow and operating process: the introduction of new technologies, devices, software; information about competitors and customers; investment projects; opening / closing of sales; changes in prices; industrial solutions; useful information for industry managers; useful information on various issues (operation of site, portal, devices; 1C, educational literature, leisure, connection and configuration of devices); reports on the works done by different departments; presentations; technical and econommical issues; self-development and learning.

At the same time, some issues that the HRMS is intended to implement in the CSN are poorly developed; the subsystems of working conditions, labor relations, planning, forecasting, HR marketing, and legal services are not considered at all [5].

Accordingly, it is advisable to improve the *Bitrix24* software system in line with the HRMS development trends, for example, to introduce the functions for staff information support and for the implementation of technical and economic processes into the conventional HRMS.

It is also necessary to expand the *Bitrix24* software features regarding the HRMS functions (for example, "labor conflicts", etc. [5]) that have not been taken into consideration.

The promising areas for improving the *Bitrix24* software are as follows:

1. Development of services in terms of expanding them in accordance with the HRMS subsystems and functions.

2. Improvement of the interface in order to harmonize it with the HRMS functions (the formation of separate sections that now are presented mixed up, for example, scandals, sports, cultural chronicle, and social security).

3. Ideally, most of the HRMS functions [5] should be incorporated in the *Bitrix24* software.

Hence, having made an analysis of *Bitrix24* software application in *VO OVEN* corporation, one can conclude that not all CSN services in the organization's system of business targets have been taken into account in the subsystems and functions of conventional HRMS. And those enclosed are realized partially, fragmentary or periodically. It is necessary to introduce a new function that will reflect the staff information support and the implementation of technical and economic processes in the current conditions of CSN development.

Further research in the field of HRSM, including for *VO OVEN* corporation, has to aim at understanding the theory of personnel IR, its role and reflection in the organizational and management structure of corporations, which should be formed taking into account the socialization of personnel and be reflected in corporate systems. Also, to ensure an adequate perception of digital technologies at industrial corporations of Ukraine, these corporations need to have qualified personnel possessing digital skills and competences. One of the options for the development of such capacity is the use of CSN.

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ВПЛИВ НА ІННОВАЦІЙНУ СПРИЙНЯТЛИВІСТЬ ПЕРСОНАЛУ
КОРПОРАТИВНИХ СОЦІАЛЬНИХ МЕРЕЖ, НА ПРИКЛАДІ
ПРОГРАМНОГО ЗАБЕЗПЕЧЕННЯ *BITRIX 24,* В КОМПАНІЇ ТОВ «ВО ОВЕН»

Вступ. Актуальним питанням підвищення інноваційної сприйнятливості (ІС) персоналу є використання внутрішньофірмових корпоративних соціальних мереж (КСМ).

Проблематика. На сьогодні в Україні відбувається активне обговорення проблем цифрових трансформацій економіки, а також важливості цифрових ініціатив і наукових досліджень у цій галузі, про що свідчить прийнята у січні

2018 року Концепція розвитку цифрової економіки та суспільства України на 2018—2020 рр. та відповідний план заходів щодо реалізації цієї Концепції (затверджений Кабінетом Міністрів України). Теоретичні та практичні питання аналізу впливу внутрішньофірмових комунікацій у КСМ на розвиток компетенцій та ІС співробітників підприємств, на сьогодні, опрацьовані не повною мірою.

Мета. Визначення тенденцій і закономірностей впливу КСМ на ІС персоналу на прикладі ПЗ *Bitrix 24* в компанії ТОВ «ВО Овен».

Матеріали й методи. Методи порівняльного аналізу роботи вітчизняних та закордонних КСМ в Україні та світі; аналіз використання ПЗ *Bitrix 24* в українській компанії.

Результати. Показано можливості підвищення ІС персоналу при використанні КСМ і класичного інтернет-порталу. Проаналізовано сервіси КСМ в системі бізнес-завдань організації та їх ідентифікація з традиційними системами управління персоналом (СУП). Приведено порівняння ефективних сфер застосування КСМ в американських компаніях і в ТОВ «ВО ОВЕН» (Україна). А також наведено підсумкові дані інформаційних повідомлень ПЗ *Bitrix 24* (жива стрічка) в компанії ТОВ «ВО Овен» за 2017 р. і за І квартал 2018 р. За результатами дослідження введено нову функцію СУП, яка показуватиме інформаційне забезпечення персоналу, реалізацію техніко-економічних процесів для розвитку КСМ в нинішніх умовах.

Висновки. Для забезпечення адекватного сприйняття цифрових технологій на промислових підприємствах України потрібні кваліфіковані кадри, які володіють цифровими навичками та компетенціями. Одним з варіантів розвитку таких компетенцій є використання КСМ.

Ключові слова: інноваційна сприйнятливість, корпоративні соціальні мережі, *Bitrix 24*.

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ВЛИЯНИЕ НА ИННОВАЦИОННУЮ ВОСПРИИМЧИВОСТЬ ПЕРСОНАЛА
КОРПОРАТИВНЫХ СОЦИАЛЬНЫХ СЕТЕЙ, НА ПРИМЕРЕ
ПРОГРАМНОГО ОБЕСПЕЧЕНИЯ BITRIX 24, В КОМПАНИИ ООО «ВО ОВЕН»»

Введение. Актуальным вопросом повышения инновационной восприимчивости (ИВ) персонала является использование внутрифирменных корпоративных социальных сетей (КСС).

Проблематика. На сегодня в Украине происходит активное обсуждение проблем цифровых трансформаций экономики, а также важность цифровых инициатив и научных исследований в этой отрасли, про что свидетельствует принятая в январе 2018 года Концепция развития цифровой экономики и общества Украины на 2018-2020 гг. и соответствующий план мероприятий для реализации этой Концепции (утвержденный Кабинетом Министров Украины). Теоретические и практические вопросы анализа влияния внутрифирменных коммуникаций в КСС на развитие компетенций и ИВ сотрудников предприятий, на сегодня, проработаны недостаточно полно.

Цель. Определение тенденций и закономерностей влияния КСС на ИВ персонала на примере ПО Bitrix24 в компании ООО «ВО Овен».

Материалы и методы. Методы сравнительного анализа работы отечественных и зарубежных КСС в Украине и мире; анализ использования ПО Bitrix24 в украинской компании.

Результаты. Показано возможности повышения ИВ персонала при использовании КСС и классического интернет-портала. Проанализировано сервисы КСС в системе бизнес-задач организации и их идентификация с традиционными системами управления персоналом (СУП). Приведено сравнение эффективных областей применения КСС в американских компаниях и в ООО «ВО ОВЕН» (Украина). А также представлены итоговые данные информационных сообщений ПО Bitrix24 (живая лента) в компании ООО «ВО Овен» за 2017 г. и за І квартал 2018 г. По результатам исследования введена новая функция СУП, которая будет отражать информационное обеспечение персонала, реализацию технико-экономических процессов для развития КСС в нынешних условиях.

Выводы. Для обеспечения адекватного восприятия цифровых технологий на промышленных предприятиях Украины необходимы квалифицированные кадры, которые владеют цифровыми навыками и компетенциями. Одним из вариантов развития таких компетенций является использование КСС.

Ключевые слова: инновационная восприимчивость, корпоративные социальные сети, *Bitrix 24*.