

Information sheet 51

Digital transformation and workplace health management

Abstract

Digitalisation of work processes, increasing flexibility of organisational structures, development of new skills: the world of work is changing rapidly thanks to information and communication technologies. These developments have been strengthened and their pace accelerated by the coronavirus pandemic. Depending on how the digital transformation is structured, the impact on employee health may be more or less positive. In light of this, new fields are opening up to workplace health management. These include incorporating health aspects into digitalisation projects, developing employee and management skills as well as ways of collaborating within teams, and even developing disconnection policies and practices within companies.

1 Introduction

In most sectors of the economy, information and communication technologies (ICT) have become essential in the production of services and manufactured goods. They have radically changed economic models, ways of production and working, and how companies are organised. New professions and services have emerged while others have evolved or are declining.

What is the impact of these changes on employee mental health in Switzerland? What challenges and opportunities do the changes present for workplace health management (WHM)? Health Promotion Switzerland wishes to respond to these questions with material taken from scientific literature, insti-

tutional reporting and specific practical experience. Since employee health has consequences for company productivity [1], these questions have additional relevance, particularly in economically challenging times.

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2 Definitions and situation in Switzerland

2.1 Definitions

ICT, digitalisation, digital transformation, dematerialisation, big data, Internet of Things, industry 4.0, artificial intelligence, new work, etc.: all of these terms are related to the use of digital technologies in the world of work. Different terms are often used with a similar meaning, or similar terms with a different meaning.

Digitalisation is the technical process of converting information into digital form. The expression “digital transformation” is more general: it refers to the change processes adopted by individuals, organisations, corporations and governments in response to digitalisation [2]. Some authors refer to “digital disruption” to highlight the importance of the upheavals [3, 4].

Digital transformation is based on ICT: these enable communication, gathering, storage, analysis and dissemination of information [5]. They include remote working tools (such as video conferencing tools), social media, knowledge management tools, electronic data management software, integrated software, etc.

These tools are sometimes based on artificial intelligence, i.e. a system of rules and algorithms imitating certain cognitive abilities. They are used to analyse large data sets (big data), automate decisions, improve diagnostics and facilitate cooperation between people and computer systems [3].

2.2 ICT situation in Switzerland

According to the Institute for Digital Business, in 2018, around two-thirds of Swiss companies had drawn up a digital transformation strategy covering at least certain processes or business areas [6]. In 2019, the School of Business in Olten conducted a study on how prepared companies were in terms of digital transformation [7]. More than half of businesses (in all sectors of the economy) said that they had initiated a digital transformation process or reached an advanced stage (Figure 1). More than 40% had adapted their organisational structure, mainly in the areas of “information and communication”, “other economic services” and “professional, scientific and technical activities”. This figure was lower in construction, teaching, the health and welfare sector, public administration and the trade

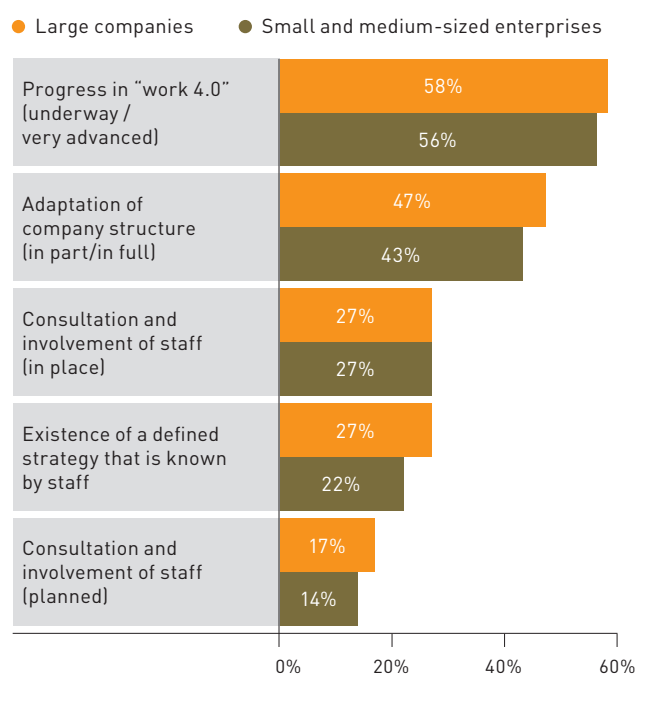
and craft sectors. Adaptations were mainly moves towards network structures, with self-organisation and self-monitoring of teams. Globally, one-quarter of those surveyed believed that employees had been able to participate in these changes; in around 15% of cases, a consultation had been planned. Finally, around one-quarter of companies had a “New Work” strategy, with slightly higher figures among large companies than SMEs.

In terms of health risks, those surveyed mentioned above all their clients’ expectations of permanent availability. This could constitute a source of stress and, depending on the profession, could create difficulties as regards work-life balance.

From spring 2020, the coronavirus pandemic forced many companies to resort to remote working. They had to purchase appropriate hardware and software, and develop staff skills in using these technologies, organising work and collaborating remotely. According to a survey conducted in May 2020, the majority of Swiss employees who were working remotely were satisfied. However, almost 90% said that it had been necessary to develop additional skills for digital working as well as technical infrastructure [8].

FIGURE 1

“New Work” in Switzerland [7]



3 Impacts on mental health

Digital transformation presents organisations and individuals with considerable challenges [9, 10, 11]:

- Growing complexity and flexibility of structures (e.g. companies with a network structure)
- Increase in performance but also in vulnerability (e.g. outages)
- Need to strengthen employee autonomy, involvement and accountability
- Distance from objects and individuals affected by the activity
- Change in team management and coordination between individuals
- Design of spaces compatible with these new forms of work
- Risk of intensification and casualisation of working conditions
- Emergence of new forms of contractual relations (e.g. working via Internet platforms) and concerns regarding the disappearance of certain roles

Depending on how they are used, ICT can have positive or negative effects on employee health and how companies operate. In this sense, there is no technological determinism. The conditions in which they are developed, implemented and used in particular are important rather than the tools themselves [9, 11]. The repercussions of ICT on mental health depend in large part on the flexibility they leave for users in addition to how well they match their needs [11]. A system that is too restrictive may be an obstacle to fulfilling tasks and a source of stress. However, too much flexibility can also be a source of confusion and cognitive overload [5].

In certain sectors, technology conjures up fears that numerous tasks will be automated and jobs will disappear. In parallel, however, it enables new jobs to emerge linked to designing and monitoring technical devices, for example. In addition, certain tasks or business areas may be difficult to digitalise, notably those exceeding a certain level of complexity, which cannot be put into standardised processes or which require empathy, judgement, creativity or improvisation [3, 12].

The media echoes the concerns, if not the stress and anxiety that these changes are generating in the world of work. In light of this, the remainder of the text will focus on three specific challenges of digitalisation from the point of view of mental health. These issues have been judged to be priorities by Health Promotion Switzerland's partners on the ground:

- Mental load and being "always on"
- Blurring of the boundaries between work and personal life
- Integration within the team in a flexible organisation

3.1 Mental load and being "always on"

ICT enable access to a huge volume of information, which is extremely useful in numerous areas (research & development, marketing, stock management, etc.). Scarcity is no longer a feature of available information but of the attentional resources enabling it to be processed [13], as well as of breaks for unwinding. This flow of information can generate a feeling of constant load, information overload, work intensification, stress, fatigue and excessive cognitive stimulation. Uncontrolled usage of ICT may lead to exhaustion or burnout. According to studies, with their use of ICT for between 4.5 and 7 hours per day, managers are particularly at risk [5]; however, as these technologies spread, this is also putting more and more employees at risk.

In the face of information obesity, it is becoming hard to distinguish between what is urgent and what is important. Inappropriate evaluation of priorities can lead to increased workload, irritation and exhaustion. In light of fast-paced work schedules and tight deadlines, ICT can also contribute to an increase in the performance and responsiveness expected of individuals [9]. This trend is growing, while the physical distance between staff and managers is preventing the latter from identifying indications of overload first-hand [5, 11].

Finally, use of computer technologies leads to additional unplanned tasks, which are sometimes perceived as a waste of time and a source of irritation and stress: updating applications, resolving IT problems and outages, etc. [5]. ICT are involved in multi-tasking, which can give the impression of over-

stretching yourself and doing work of a lower quality [5, 11, 12]. Resolving a connection issue with your computer or reading and responding to e-mails while attending a work meeting: numerous tasks, both planned and unplanned, are carried out in parallel, and the time spent taking decisions, reflecting and acting merges into one.

3.2 Blurring of the boundaries between work and personal life

Remote working gives the individual flexibility in their personal organisation according to their needs and their private and family life. Less time spent travelling represents time saved, which can be spent in their private life or working; it also helps to reduce fatigue and stress. Remote working, even for one day a week, contributes to a better quality of life and increased productivity [8].

However, the boundaries between work and personal life may blur in terms of space (working from home), time (working in the evening, at weekends and during the holidays) and tools (professional and personal use of the same computers, phones, etc.) [5, 9, 11]. The possibility of being able to access professional communication channels anytime and anywhere increases the risks of being “always on”, all the more so since interactions are faster and decisions have to be taken quickly [12]. If remote working is not regulated by the company, managers and members of staff may be inclined to breach legislative provisions concerning working hours without necessarily being aware of this [11]. An imbalance between private and professional life is a barrier to recovery, family and social life and therefore to mental health. In certain cases, the fear of missing out may even result in a compulsive or pathological relationship with communication tools [7, 11].

3.3 Integration within the team in a flexible organisation

Digital transformation has resulted in a shift in social connections. Thanks to ICT, it is possible to devise virtual organisations. This means networks of people and units that are physically distant but working together towards the same objective without having to meet face-to-face. ICT enable teams to be formed at a global level at a lower cost thanks to reduced travel.

However, in this type of organisation, interpersonal relationships are mainly reduced to interactions without physical contact. As a consequence, they contribute little to no social aspect and have no inputs from non-verbal communication. In a survey conducted by gfs.bern in spring 2020 [8], 71% of people working remotely said that they missed informal contact within their team.

Compared to face-to-face meetings, virtual discussions give rise to more regressive or informal behaviours (inattentiveness, attitude of withdrawal, less attention paid to how a message is expressed, etc.). In addition, they seem to lead to greater fatigue, difficulties developing a sense of community as well as a risk of disempowering individuals [9]. Furthermore, in virtual organisations, people have to research the information they need to carry out their work remotely themselves. Dividing up tasks between members of a virtual team may create an obstacle to the big picture, with the risk of a loss of meaning [5, 11]. Additional efforts also have to be made to maintain social contact with the organisation. In the same vein, physical distance may present an obstacle to the visibility of individual contributions and the resulting appreciation of them [9]. It is more difficult for managers of virtual teams to assess individual workloads as well as difficulties encountered in achieving objectives.

In certain working contexts, use of ICT may strengthen the competition between staff members and, as a result, their isolation. This can be explained, for example, by the traceability of individual actions, performance monitoring and comparison between individuals [5]. In the case of automated tasks, teams may become smaller. An individual can therefore find themselves isolated in a role; in addition to being a security concern in the case of hazardous activities, working alone is also a barrier to integration. Yet social support and a feeling of belonging to a team and a company are vital resources for mental and physical health.

4 Challenges and opportunities for workplace health management

The WHM practices identified in the literature in connection with digital transformation focus on four issues, which are covered below (Figure 2).

4.1 Incorporating health aspects into digitalisation projects

A digitalisation project that is conducive to employee health is based on in-depth reflection regarding the tasks to be digitalised and how this should be done. Computerising an activity – or automating it in the case of manual tasks – should enable it to be simplified and improve performance while safeguarding employee health. When activities are digitalised, maintaining a wide range of tasks and different levels of complexity makes it possible to vary the mental load and limit cognitive overload. When the routine part is automated, the individual then only has critical and complex situations to manage, which is mentally exhausting [3, 5, 10, 11].

Taking adequate account of users’ needs and their involvement in development and tests are essential for a technology to be functional and accepted by them [14]. Table 1 shows a number of key factors in executing a digitalisation project that is conducive both to mental health and adoption of the technology by employees [11, 12].

4.2 Developing staff skills

Technological progress and organisational changes require constant adaptability and may lead to skills rapidly becoming obsolete – in certain business areas, at least. According to the model proposed by Lazarus and Folkman [15], the perception of a significant imbalance between the demands of the task and the skills an individual ascribes to themselves is a source of stress. A sense of competence is a pillar of mental health as it provides reassurance on the individual’s ability to tackle challenges they face in their environment. In addition, skills becoming obsolete may result in job insecurity and represent increasing vulnerability in the labour market.

Continuing professional development is a key element in maintaining an individual’s suitability for their role, their attractiveness in the labour market and their health [10, 12, 16]. It is all the more important when digital transformation affects individuals

FIGURE 2

WHM practices in connection with digital transformation



TABLE 1

Key factors for a digitalisation project conducive to employee mental health

- Viewing digitalisation as a means of improving the company’s performance while taking into account employee health
- Knowing the software tools, their potential and their limits
- Communicating in an iterative way and taking into account the opinions and feedback of users
- Involving employees in the needs assessment, the choice of processes and activities to digitalise, as well as the design of new working systems and procedures
- Evaluating the potential repercussions of digitalisation on employee health
- Training employees and management on the new tools and ways of working
- Allocating sufficient financial resources for supporting measures (collaborative approach, training, support for users, etc.)
- Anticipating needs in terms of equipment, materials and working environment

who have not had the opportunity to develop a digital mindset and digital skills [12].

From the perspective of Swiss companies, the skills that prove most important given digital transformation are the capacity to learn and adapt, flexibility, team spirit and the ability to cooperate and work as part of a network [12, 17]. Creativity, a critical mindset, communication and cooperation: these

“four Cs” encourage the development of problem-solving skills and are the key skills for the 21st century [10]. They enable us to deal with unexpected situations, uncertainty, the unknown, and to break free from running on autopilot.

Furthermore, with the emergence of new forms of working, employees are led to act more independently and more accountably, which involves self-organisation, self-discipline, communication skills and self-structuring of work. The ability to stay in contact with your professional circle is becoming vital, as is the ability to find and sift through relevant information and to maintain an overview of your work [9, 12].

4.3 Developing skills specific to managers

There is increasing interest in forms of organisation which no longer feature a traditional hierarchy [18]. Nonetheless, most companies continue to rely on a hierarchical structure. However, this is affected by digital transformation. Showing appreciation, ensuring individuals are integrated in teams, supporting them in the development of new skills: given the changes and uncertainties brought about by ICT, support from middle management is an important resource for employee health. In light of this, team management requires an alignment between traditional hierarchical management and matrix management, such as project management and coaching. This balance depends on the type of activity carried out by the team as well as the individuals it comprises.

As a consequence, supervising staff requires a good sense of organisation, coordination, prioritisation and the overall picture. Managers should also have social, communication and conflict management skills. Part of their work consists of nurturing the sense of belonging to the team and the company, structuring work, acting as a model and giving meaning to changes [10, 11, 12].

These challenges are greater with remote working, mobile working, teams spread across several sites or with organisation on a project basis, bringing together people from different backgrounds. These forms of working, which are characterised by less proximity between individuals, are less conducive to interpersonal and informal interactions. As a result, face-to-face meetings and cultivating relationships remain vital for maintaining social contact and be-

longing – a key resource for mental health – as well as for boosting work efficiency (more direct, faster and more precise discussions and understanding, etc.) [11, 12]. In time-limited projects, the phase in which the team is disbanded also requires particular attention as it may have an impact on self-esteem and the feeling of the task having been accomplished.

Seeking balance between independence and control is an additional challenge inherent in flexible forms of organisation. The middle manager is caught in the crossfire: on one side is executive management, which needs checks on the work performed, and on the other is the employees, who have more independence and freedom. This raises complex questions concerning how to evaluate the work: What indicators are relevant? How can the mental load of the work be measured, particularly in the fields of knowledge? How should the acceptable time for performing a task be determined? How should people who need more time be supported? [11].

Furthermore, technological developments raise ethical questions. By introducing distance between individuals, digital technologies pose the risk of depersonalising relationships, which makes it easier to adopt inappropriate behaviours both between colleagues and with beneficiaries. In view of this, managers have a role to play in terms of ethical oversight [3] and fostering reflection on the benefits, limits and human issues of using technology.

Lastly, the way that companies are managed may promote or impede the development of staff conduct that is in line with the challenges mentioned above. Managers' working time is fast paced and punctuated by frequent interruptions. For them to be able to effectively manage their teams, carry out their own duties and take better decisions, all while safeguarding their own health, it is important to give them time to take a step back from urgency, to reflect and to develop their own skills [10].

4.4 Implementing disconnection policies and practices

Some countries and companies have introduced a right to disconnect to contribute to work-life balance. Various employers have implemented technical barriers to using software tools at certain times of day [11]. This policy aims to ensure respect for legal working times and rest periods. However, the im-

pact has not yet been clearly substantiated. Bypass strategies have been observed, such as using personal email or copying files onto a flash drive.

Setting boundaries between the different areas of day-to-day life contributes to well-being and creativity. Likewise, scheduling in disconnected time alone during the working day is recommended so that you can focus on a task and reflect without being interrupted [3]. Knowing how to disconnect is a skill that is built up with the support of the employer. In this sense, putting in place a policy or corporate charter may set out a framework and indicate the values and principles to work towards [11]. This policy should also clarify cost sharing related, for example, to remote or mobile working (materials, furniture, etc.).

5 Conclusion

A growing number of companies are digitalising processes and implementing flexible organisation based on usage of ICT. Digital transformation can help to increase work productivity. It presents new possibilities for staff development; moreover, mobile working has broad support since the coronavirus pandemic. However, there are risks that should be monitored: excessive mental load and being “always on”, blurring of the boundaries between work and personal life, or the erosion of social support within teams. These secondary undesired effects are not inherent to the technology. It is above all the usage that counts.

With this in mind, it is recommended to run digitalisation projects in a collaborative way and incorporate the issue of “employee health”. Putting in place policies concerning disconnection and communication within teams is also advised. Lastly, it is important to develop the skills of employees and managers to enable them to maintain a balance between their resources and the new demands of work. On this basis, Health Promotion Switzerland plans to continue developing innovative approaches and tools aimed at supporting “WHM 4.0 practices” within Swiss companies.

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Imprint

Editor

Health Promotion Switzerland

Project management

Dominik Fässler, Health Promotion Switzerland

Authors

- Stéphanie Hannart, School of Health Sciences Valais, HES-SO Valais-Wallis, Sion
- Dr. Rafaël Weissbrodt, School of Health Sciences Valais, HES-SO Valais-Wallis, Sion

Series and issue number

Health Promotion Switzerland, Information sheet 51

© Health Promotion Switzerland, April 2021

Information

Health Promotion Switzerland
Wankdorfallée 5, CH-3014 Bern
Tel. +41 31 350 04 04, fax +41 31 368 17 00
office.bern@promotionsante.ch
www.promozionesalute.ch/publicazioni