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## **D8.2 Toolkit for workplaces to promote health, prevent chronic health problems, and foster work participa- tion of individuals with chronic diseases**

**WP8 Employment and Chronic Diseases:  
health in all sectors**

**Task 8.2 Development and piloting of a  
toolkit for workplaces to foster wellbeing,  
health, and work participation**

**Eeva Rantala & Jaana Lindström**  
Finnish Institute for Health and Welfare (THL),  
Helsinki, Finland  
WP8 co-leader

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**Finnish institute for  
health and welfare**

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## Contents

The CHRODIS PLUS Joint Action .....	4
Contributors and acknowledgements .....	5
Executive summary .....	6
Introduction .....	9
Section 1 – Groundwork and development of the pilot version of the Toolkit .....	11
1.1 Systematic literature studies .....	12
1.2 Stakeholder interviews .....	14
1.3 Behavioural models and theories .....	20
1.4 Practical considerations .....	21
1.5 Construction of the Toolkit .....	22
Section 2 – Pilot .....	23
2.1 Aims .....	23
2.2 Materials and methods .....	23
2.3 Results .....	25
Section 3 – Further development of the Toolkit .....	35
Section 4 – Assessment of strengths and limitations .....	36
Section 5 – Conclusion .....	39
Section 6 – Recommendations .....	40
References .....	41
Annex 1 – Outline for interviews with employers and stakeholders .....	44
Annex 2 – Outline for interviews with employees .....	47
Annex 3 – Invitation to participate in the pilot .....	50
Annex 4 – Information provided for pilot participants .....	52
Annex 5 – Cover letter of the pilot baseline questionnaire .....	58
Annex 6 – Baseline questionnaire of the pilot .....	59
Annex 7 – Cover letter of the pilot follow-up questionnaire .....	67
Annex 8 – Follow-up questionnaire of the pilot .....	69
Annex 9 – CHRODIS PLUS Toolkit for Workplaces .....	74

## The CHRODIS PLUS Joint Action

**CHRODIS PLUS** is a three-year initiative (2017–2020) funded by the European Commission and participating organisations. Altogether 42 beneficiaries representing 20 European countries collaborate on implementing pilot projects and generating practical lessons in the field of chronic diseases.



The very core of the Action includes 21 pilot implementations and 17 policy dialogues:

- The pilot projects focus on the following areas: health promotion & primary prevention, an Integrated Multimorbidity Care Model, fostering the quality of care for people with chronic diseases, ICT-based patient empowerment and employment & chronic diseases.
- The policy dialogues (15 at the national level and 2 at the EU level) raise awareness and recognition in decision-makers with respect to improved actions for combatting chronic diseases.

**A heavy price for chronic diseases:** Estimates are that chronic diseases cost EU economies €115 billion or 0.8% of GDP annually. Approximately 70% to 80% of healthcare budgets across the EU are spent on treating chronic diseases.

**The EU and chronic diseases:** Reducing the burden of chronic diseases, such as diabetes, cardiovascular diseases, cancer, and mental disorders, is a priority for EU Member States and at the EU Policy level, since they affect 8 out of 10 people aged over 65 in Europe.

A wealth of knowledge exists within EU Member States on effective and efficient ways to prevent and manage cardiovascular diseases, stroke, and type-2 diabetes. There is also great potential for reducing the burden of chronic diseases by using this knowledge in a more effective manner.

**The role of CHRODIS PLUS:** During its 36 months of operation, CHRODIS PLUS will contribute to the reduction of this burden by promoting the implementation of policies and practices that have been demonstrated to be successful. The development and sharing of these tested policies and projects across EU countries is the core idea driving this action.

**The cornerstones of CHRODIS PLUS:** This Joint Action raises awareness of the notion that in a health-promoting Europe – free of preventable chronic diseases, premature death, and avoidable disability – initiatives on chronic diseases should build on the following four cornerstones:

- health promotion and primary prevention as a way to reduce the burden of chronic diseases
- patient empowerment
- tackling functional decline and a reduction in the quality of life as the main consequences of chronic diseases
- making health systems sustainable and responsive to the ageing of our populations associated with the epidemiological transition

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## Executive summary

Many chronic diseases have their origin in lifestyles, and lifestyles are shaped by the environments we live in. The majority of adult population spends a considerable amount of time at work. Hence, workplaces offer an ideal setting for reaching and promoting the wellbeing and health of large audiences. Furthermore, fostering employees' wellbeing, health, and work participation benefits not only employees, but also employers and the society in many ways.

CHRODIS PLUS Work Package 8 (WP8) focused on chronic diseases and employment. In task 8.1 of WP8 the objective was to develop a training tool for the management of workplaces. The training tool provides information on and tools for measuring and strengthening the inclusion and work ability of employees with chronic conditions. In Task 8.2, the objective was to develop and pilot a toolkit that collects concrete, evidence-based means through which workplaces can promote all employees' wellbeing and health, prevent the development of lifestyle-related chronic health problems, and support employees with chronic health problems to continue working. Together the CHRODIS PLUS Training Tool for Managers and the Toolkit for Workplaces form the *CHRODIS PLUS Workbox on Employment and Chronic Conditions*. The Workbox as a whole aims to raise awareness of the benefits of investing in the wellness, work ability, and inclusion of all employees, and offers tools to make such investments happen from the identification of needs to action. The Workbox is aimed at workplaces and their stakeholders, actors working in the field of occupational wellbeing and health, and policy-makers. This report describes the work of WP8 Task 8.2: the development and pilot of the CHRODIS PLUS Toolkit for Workplaces. The actual Toolkit can be found in [Annex 9](#). This report is recommended at anyone interested in learning more about the Toolkit development and pilot processes, as well as the results of the pilot.

The CHRODIS PLUS Toolkit for Workplaces is founded on scientific evidence and empirical knowledge on effective and feasible ways to promote employees wellbeing, health, and work participation at the workplace. Scientific evidence was synthesized by conducting systematic literature studies on the effectiveness of workplace interventions aiming to 1) promote health, 2) prevent chronic diseases, and 3) support work participation of individuals with chronic health conditions. Empirical knowledge was collected by conducting 45 stakeholder interviews that involved altogether 67 individuals from six EU countries. Interviewees included managers and employees of workplaces, as well as occupational wellbeing and health professionals. The aim of the interviews was to deepen understanding on the possibilities, facilitators, and barriers of promoting employees' wellbeing, health, and work participation, and of preventing the development and progression of chronic health problems at the workplace. The construction of the Toolkit was guided by the results of the literature studies and interviews, behaviour change models and theories, and practical considerations relevant for the workplace setting.

Altogether ten medium to large workplaces from six European countries agreed to pilot the Toolkit. The aims of the pilot were to assess the usability, utility, and content of the Toolkit, and to evaluate the feasibility of the Toolkit in a real-world setting where workplaces use it independently. The evaluation was based on data collected with questionnaires at baseline and at follow-up roughly six months later. Overall, pilot participants evaluated the Toolkit useful, well-constructed, easy-to-read, and sufficiently detailed a guide. At baseline, all workplaces considered implementing some of the means suggested in the Toolkit. At follow-up, four workplaces reported having implemented Toolkit means during the pilot and intending to continue implementation post pilot. Implemented interventions comprised 49 specific means, covering 41% of the Toolkit selection and representing all seven Toolkit domains. The coverage of means was 11 percentage points higher than at baseline at these workplaces. Seven workplaces intended to implement new means after the pilot. The results suggest that the Toolkit is adaptable to different types of workplaces and that it is possible for workplaces to use it independently without major external support.

The Toolkit was refined and complemented based on feedback received from the pilot workplaces and from WP8 Task 8.2 partners. The final Toolkit collects 127 various concrete means for fostering the wellbeing, health, and work participation of all employees, regardless of their work ability and health status. The means are categorized into seven domains: 1) nutrition, 2) physical activity, 3) ergonomics, 4) mental health and wellbeing, 5) recovery from work, 6) community spirit and atmosphere, and 7) smoking cessation and reduction of excess alcohol consumption. Within each domain, the means are further grouped into four different types of approaches with which the given domain can be advanced. The approaches address: 1) knowledge and skills, 2) working environment, 3) policies, and 4) incentives. In addition, the Toolkit contains three appendixes that provide further guidance and tools for mapping baseline situation at the workplace, identifying employees' needs, selecting feasible means and designing their successful implementation to best support employees' wellbeing, health, and continuation of work. The Toolkit is designed for the use of everyone involved in fostering occupational wellbeing and health, in particular employers, the management of workplaces, human resources personnel, occupational wellbeing and health professionals, and policy makers. By the end of the Joint Action CHRODIS PLUS, the Toolkit will be freely available both as a Pdf document and as a web-based application in ten languages: English, German, French, Italian, Spanish, Dutch, Hungarian, Lithuanian, Danish, and Finnish.

For promoting the wellbeing, health, and work ability, and preventing the development of chronic diseases among all employees, and for helping individuals with chronic health problems to continue working and feel included in the work community, the following steps are recommended:

- Employers:
  1. Become familiar with and use the CHRODIS PLUS Workbox
- Each actor interacting with employers and policy-makers:
  1. Raise employers' and policy-makers' awareness of the benefits of investing in the wellbeing, health, work ability, and inclusion of all employees
  2. Advance the dissemination and implementation of the CHRODIS PLUS Workbox
- Policy-makers:
  1. Encourage an inter-sectoral *health in all sectors* -approach
  2. Create legislative frameworks to improve the employment of individuals with chronic health problems

**Figure 1** summarizes the key information included in this report and provides a visual guide to help navigate through the document.

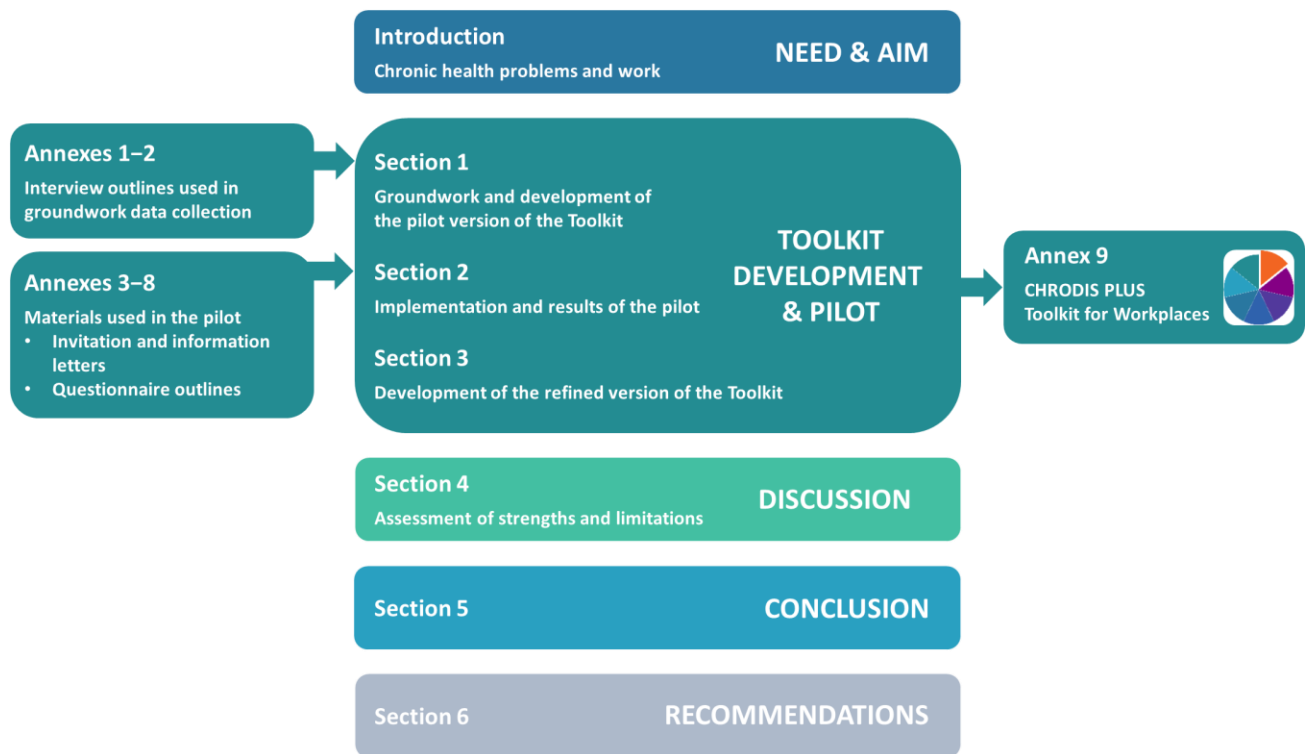


Figure 1. Document orientation visual guide



## Introduction

This section provides a brief introduction to:

1. interconnections between chronic diseases and work
2. workplace health promotion and disease prevention
3. aim of this report

Chronic diseases – or noncommunicable diseases – have been characterized as conditions that are not passed from person to person, and that tend to have long duration and generally slow progression (WHO 2018). The four main types of chronic diseases are cardiovascular diseases (e.g., ischemic heart disease and stroke), cancers, chronic respiratory diseases (e.g., chronic obstructed pulmonary disease and asthma), and diabetes (WHO 2018).

Chronic diseases have vast social and economic influences on the employment sector (OECD/EU 2016). More than one in four employees in Europe reported suffering from a long-standing illness or health problem in 2018 (Eurostat 2019), and even larger proportion is at risk of developing health problems in the future. Unhealthy lifestyles, chronic disease risk factors, and chronic diseases predict poorer employment prospects, earlier retirement, and lower income (OECD/EU 2016; Eurostat 2019). Employees with or at risk of chronic diseases may also encounter discrimination. One reason for these may be that employers do not have enough knowledge, support, or practical tools to create working conditions that foster the inclusiveness, wellbeing, health, and work ability of all employees, regardless of their health status. For sustainable society, work participation of people with or at risk of chronic diseases needs to be enhanced.

Many chronic diseases have their origin in lifestyles. Lifestyles, then, to a large extent are shaped by the environments we live in. Working people spend up to one third of their waking hours at work. Workplace is thus an important setting to reach large audiences, and to promote health and prevent chronic diseases equitably. Particularly workplaces where work is done in shifts should focus on creating health-supporting working environments. Shift work namely predisposes to unhealthy lifestyles, such as poor dietary habits (Hemiö et al. 2015; 2020), weight gain (Morikawa et al. 2007; Zhao et al. 2012; van Amelsvoort et al. 1999), and non-communicable diseases, such as type 2 diabetes (Gan et al. 2015; Hansen et al. 2016; Vetter et al. 2018), metabolic syndrome (Esquirol et al. 2009; De Bacquer et al. 2009; Pietroiusti et al. 2010), and cardiovascular diseases (Vyas et al. 2012; Vetter et al. 2016; Torquati et al. 2018). In Europe, approximately 20% of total workforce works in shifts (Boisard et al. 2002).

Fostering occupational wellbeing has the potential to benefit not only employees, but also employers and the society in many ways. Employees benefit through improved health, greater wellbeing, and improved job satisfaction. Benefits for employers are reduced absenteeism, occupational healthcare costs, and staff turnover, as well as improved productivity, competitive advantage, and an image as a caring employer (WHO & World Economic Forum 2008; Grimani et al. 2019; Krekel et al. 2019). The society, in turn, benefits via increased sustainability and equity, improved population health, and reduced healthcare consumption.

CHRODIS PLUS Work Package 8 (WP8) focused on chronic diseases and employment. In task 8.1 of WP8, the objective was to develop a training tool that supports the managers of workplaces in promoting the inclusion and work ability of employees with chronic conditions. In Task 8.2 of WP8 the objective was to develop and pilot a toolkit that collects evidence-based, concrete, and practical means through which workplaces can 1)

promote employees' wellbeing and health, 2) prevent the development of lifestyle-related chronic diseases, and 3) support employees with chronic health problems to continue working. Regarding chronic diseases, the focus was on conditions that are related to lifestyle, workplace, and behaviours, and that have heavy disease burden. Among such diseases are cardiovascular diseases, type 2 diabetes, lung diseases, musculoskeletal disorders, and depression. The CHRODIS PLUS Training Tool for Managers and the Toolkit for Workplaces form a whole called the CHRODIS PLUS Workbox on Employment and Chronic Conditions. The aim of the current report is to describe the development and pilot of the CHRODIS PLUS Toolkit for Workplaces.

## Section 1 – Groundwork and development of the pilot version of the Toolkit

This section focuses on the foundation of the Toolkit, which consists of:

1. scientific evidence collected with systematic literature studies
2. stakeholder interviews conducted in six European countries
3. behavioural models and theories of the drivers of behaviour
4. practical considerations relevant for the workplace setting

The development of the CHRODIS PLUS Toolkit for Workplaces was based on 1) scientific evidence collected with systematic literature studies, 2) empirical knowledge collected with stakeholder interviews, 3) behavioural models and theories of the determinants of behaviour, and 4) practical considerations relevant for the workplace setting (**Figure 2**). The following sections describe how these four elements guided the development process, and what the first version of the Toolkit was like.



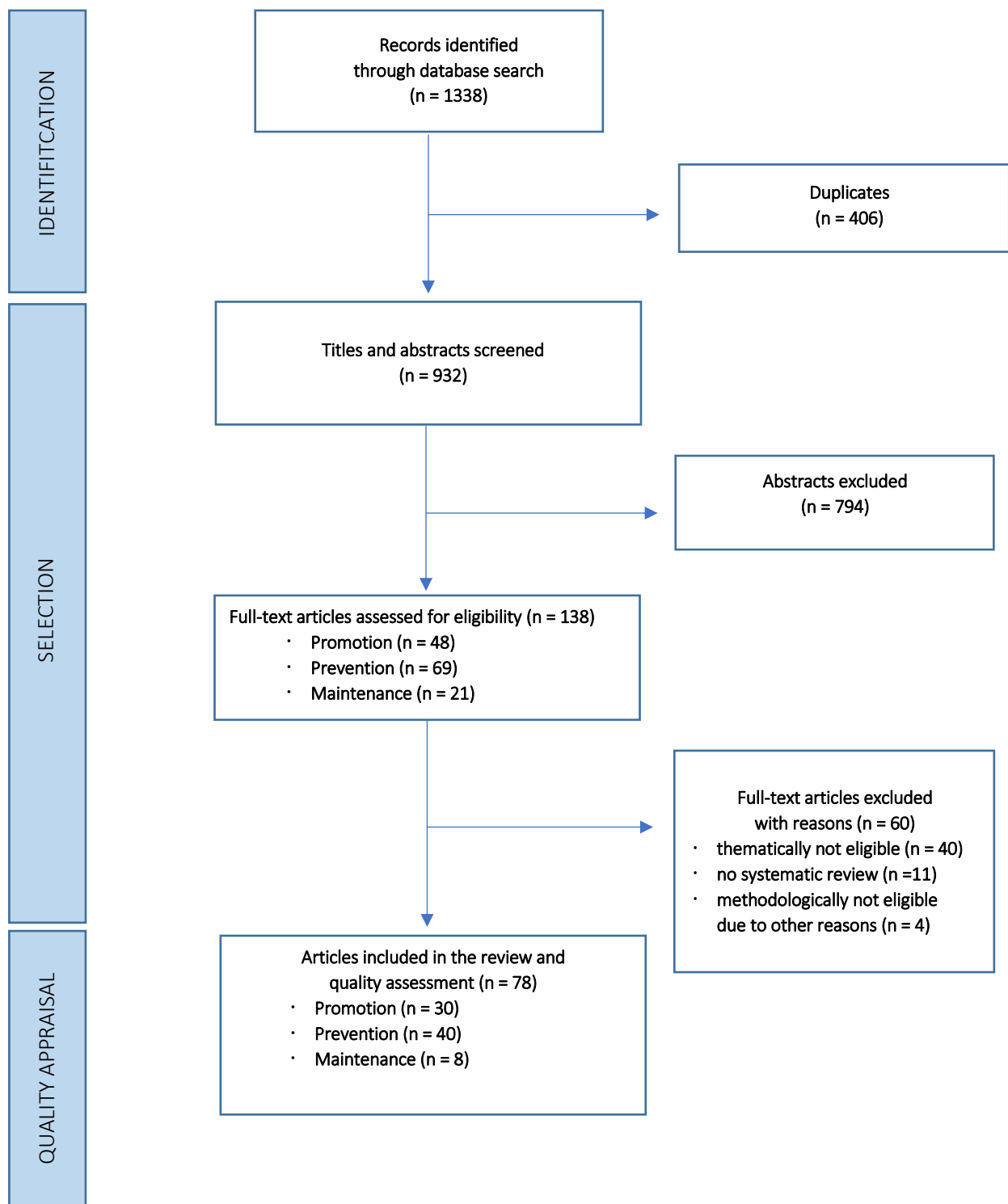
**Figure 2.** Elements that guided the development of the CHRODIS PLUS Toolkit for Workplaces

## 1.1 Systematic literature studies

Several systematic literature reviews were conducted within CHRODIS PLUS Work Package 8 to compile scientific evidence on the effectiveness of interventions targeting employees' health promotion and non-communicable disease prevention, as well as the promotion of work participation and return-to-work of employees with chronic health problems. Three of the literature reviews were published in peer-reviewed scientific journals (Lamore et al. 2019; Nazarov et al. 2019; Proper and van Oostrom 2019). In addition to these, one systematic scoping meta-review was conducted and its results used in the development of the Toolkit, although the work has not been published so far.

The scoping meta-review of systematic reviews was conducted by THL. The objective of this review was to compile current scientific evidence regarding the effectiveness of interventions aiming to 1) promote healthy lifestyle patterns, 2) prevent the development of non-communicable diseases, and 3) enhance the work participation of employees with emerged chronic health problems in a workplace setting. Regarding non-communicable diseases, the focus was on lifestyle-related conditions with a high disease burden, particularly type 2 diabetes, cardiovascular diseases, lung diseases, musculoskeletal disorders, and depression. Five databases (Medline, Cinahl, PsycInfo, Web of Science, and Cochrane Database of Systematic Reviews) were searched from January 2000 to July 2018. The literature search identified 1338 review articles. After the removal of duplicates, 932 review articles remained. Based on the relevance of titles, abstracts, and full texts, 78 reviews were eventually selected to the review. **Figure 3** presents the flow chart of the study selection. Quality of evidence was assessed using the AMSTAR2 critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both (Shea et al. 2017).

Interventions that the reviews identified effective formed the basis of concrete means that would be selected to the Toolkit for Workplaces. In addition to them, other relevant interventions could be included, if they had been found promising in other peer-reviewed scientific publications (original articles, reviews, meta-analyses) of which the Task 8.2 working group was aware.



**Figure 3.** Flow chart of the study selection of the scoping meta-review to compile current scientific evidence regarding the effectiveness of interventions aiming to 1) promote healthy lifestyle patterns, 2) prevent the development of non-communicable diseases, and 3) enhance the work participation of employees with emerged chronic health problems.

## 1.2 Stakeholder interviews

Besides reviewing scientific evidence, it was important to hear the voices and learn from the experiences of the future end users of the Toolkit. Developing feasible, effective, and attractive workplace interventions for promoting employees' wellbeing, health, and work participation requires understanding the facilitators and barriers workplaces have for implementing such interventions. Furthermore, designing effective interventions demands awareness of factors that encourage and discourage employees to participate in them. To explore these, and to map actions workplaces have already taken to support employees' wellbeing, health, and work participation, managers and employees of workplaces, as well as occupational health professionals were interviewed. The aim of the interviews was to collect data on:

- 1) actions workplaces have taken to support the wellbeing and health of all employees,
- 2) actions workplaces have taken to support the work participation of employees with chronic health problems,
- 3) facilitators and barriers of implementing the above-mentioned actions,
- 4) factors that encourage and discourage employees to make use of the opportunities their workplaces provide them for supporting personal wellbeing, health, and work participation, and
- 5) managers' and occupational health professionals' perspectives on the responsibility of workplaces in promoting employees' wellbeing, health, and work participation

The outline for manager and stakeholder interviews, and the outline for employee interviews can be found in [Annex 1](#) and [Annex 2](#), respectively.

Interviews were carried out in six European countries: Denmark, Finland, Italy, the Netherlands, Spain, and Germany. The following partners of Task 8.2 participated in conducting the interviews: Danish Committee for Health Education (DCHE), Denmark; Finnish Institute for Health and Welfare (THL), Finland; Fondazione IRCCS Istituto Neurologico Carlo Besta (FINCB), Italy; National Institute for Public Health and the Environment (RIVM), the Netherlands; Granada Metropolitan Health District (SAS/CSJA), Spain; and Technische Universität Dresden (TUD), Germany. In each country, the interviews were conducted in the respective language. The interview outlines were translated into target languages, and the interviews were recorded, transcribed, and translated into English by the partners who conducted the interviews. The analysis of results was conducted by THL.

Interviewees gave their written informed consent to participate in the interview, to record the interview, and to use the collected data in developing the CHRODIS PLUS Toolkit for Workplaces. The data collected with the interviews was treated confidentially according to the EU General Data Protection Regulation (GDPR), stored in a protected file, which only the members of the CHRODIS PLUS Task 8.2 working group has access to, and was not handed over to anyone outside the working group. The collected data was analysed and the results of the interviews reported on a group level so that the identification of individual interviewees or organizations they represented is not possible.

Forty-five interviews were conducted with altogether 67 interviewees (**Table 1**) from 27 different organizations. Interviewed individuals represented either workplace management, employees, or stakeholders that collaborate with workplaces in promoting employees' wellbeing and health. Management, employee, and stakeholder level interviews were conducted separately. However, interviews of a certain subgroup could be conducted either as individual or group interviews.

**Table 1.** Number of interviews conducted in different countries.

Country	Management (n persons)	Employee (n persons)	Stakeholder (n persons)	Altogether (n persons)
Denmark	2 (2)	0 (0)	1 (1)	3 (3)
Finland	3 (3)	6 (6)	7 (8)	16 (17)
Italy	2 (2)	2 (4)	2 (2)	6 (8)
the Netherlands	4 (6)	2 (8)	2 (2)	8 (16)
Spain	3 (4)	4 (13)	2 (2)	9 (19)
Germany	1 (1)	1 (2)	1 (1)	3 (4)
<b>Altogether</b>	<b>15 (18)</b>	<b>15 (33)</b>	<b>15 (16)</b>	<b>45 (67)</b>

Interviewed managers and employees represented 15 medium (50–249 employees) to large ( $\geq 250$  employees) workplaces from various industries. At these workplaces, the type of work employees did varied highly depending on their profession and position in the organization. **Table 2** compiles the characteristics and challenges of various jobs at these workplaces. In four of the 15 workplaces that the interviewees represented, at least part of employees worked in shifts.

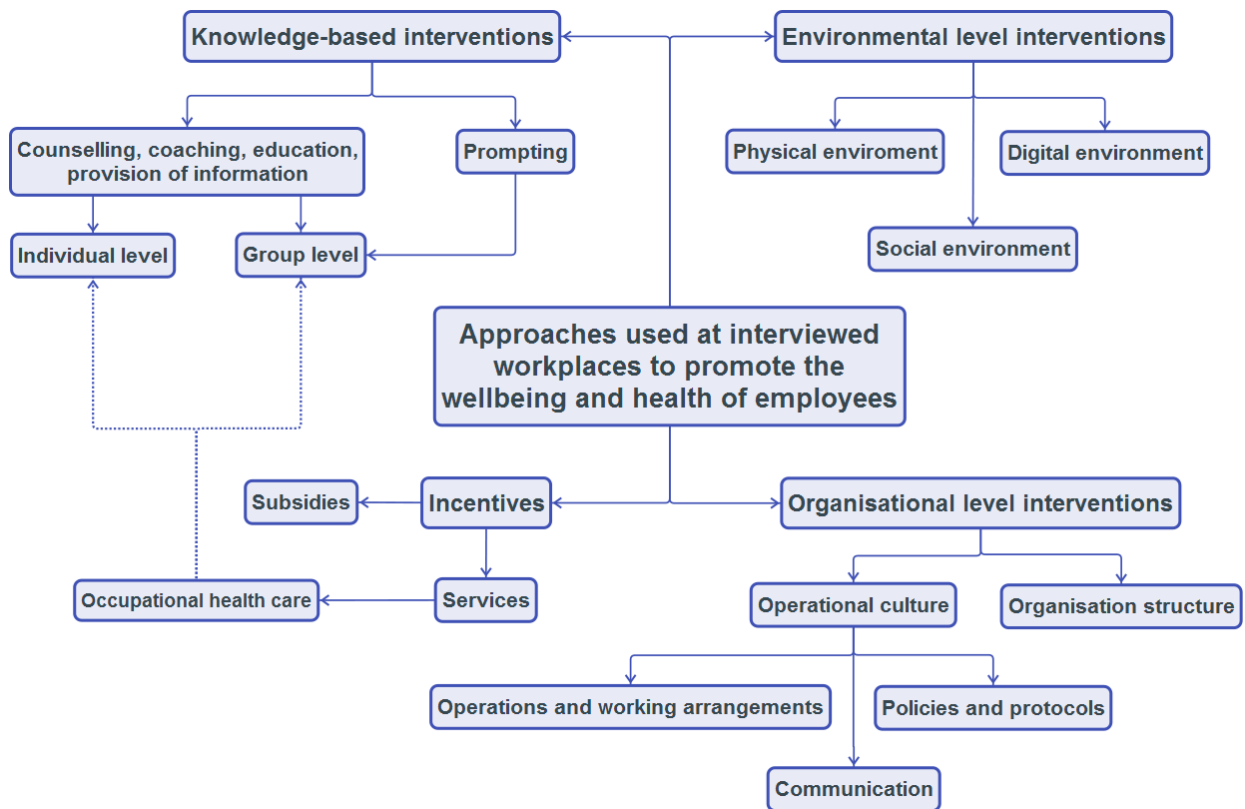
**Table 2.** Characteristics and challenges of various jobs at the interviewed workplaces.

Characteristic and challenges of various jobs
Irregular working hours
Shift work
Long shifts (e.g., 12 hours)
Intercontinental travelling and dealing with jet lag
Physically demanding work (e.g., lifting, carrying, repetitive work)
Working in difficult/ uncomfortable working positions
Working in cramped working conditions/ in confined space
Sedentary office work
Working in an open office in which there is a lot of noise
Knowledge-intensive work
Product development
Sales
Customer service
Communication
Management
Team leading
Dealing with mental pressure and uncertainty

Interviewed stakeholders represented 12 different organizations. Among the organizations were occupational health care providers of the interviewed workplaces as well as other wellbeing and health service providers and consultancies, non-governmental patient organizations, research and development organizations, and health and welfare authorities.

**Actions workplaces had taken to support the wellbeing, health, and work participation of employees**

The interviewees portrayed a wide array of interventions that workplaces had implemented. The interventions had targeted various domains of health, and used diverse approaches to achieve set goals. Interventions the interviewees described had aimed at promoting healthy diet, physical activity, ergonomics, mental wellbeing and health, recovery, community spirit and atmosphere, smoking cessation, and the reduction of excess alcohol consumption. Approaches that had been used to encourage employees to adopt healthy lifestyle patterns and to support their wellbeing at work could be categorised into four main categories: 1) knowledge-based interventions, 2) environmental interventions, 3) organisational interventions, and 4) incentives (**Figure 4**). Knowledge-based interventions involved an educational element, such as the provision of information or teaching new skills. Environmental interventions altered physical, social, or digital working environment. Organisational interventions comprised changes to organisation structure or operational culture, which involves for instance policies, protocols, and operations. Incentives involved a range of benefits the employer provided employees to encourage them to adopt and maintain healthy lifestyle patterns. Among these were for instance financial and time-related subventions and available services.



**Figure 4.** Approaches used to achieve the goals of reported workplace interventions.

Several interviewed workplaces had adopted similar practices for identifying employees’ health problems, and fostering the work participation of employees with emerged chronic health problems. **Figure 5** combines these practices into a comprehensive and chronological protocol for identifying and finding solutions to employees’ potential health challenges early on.



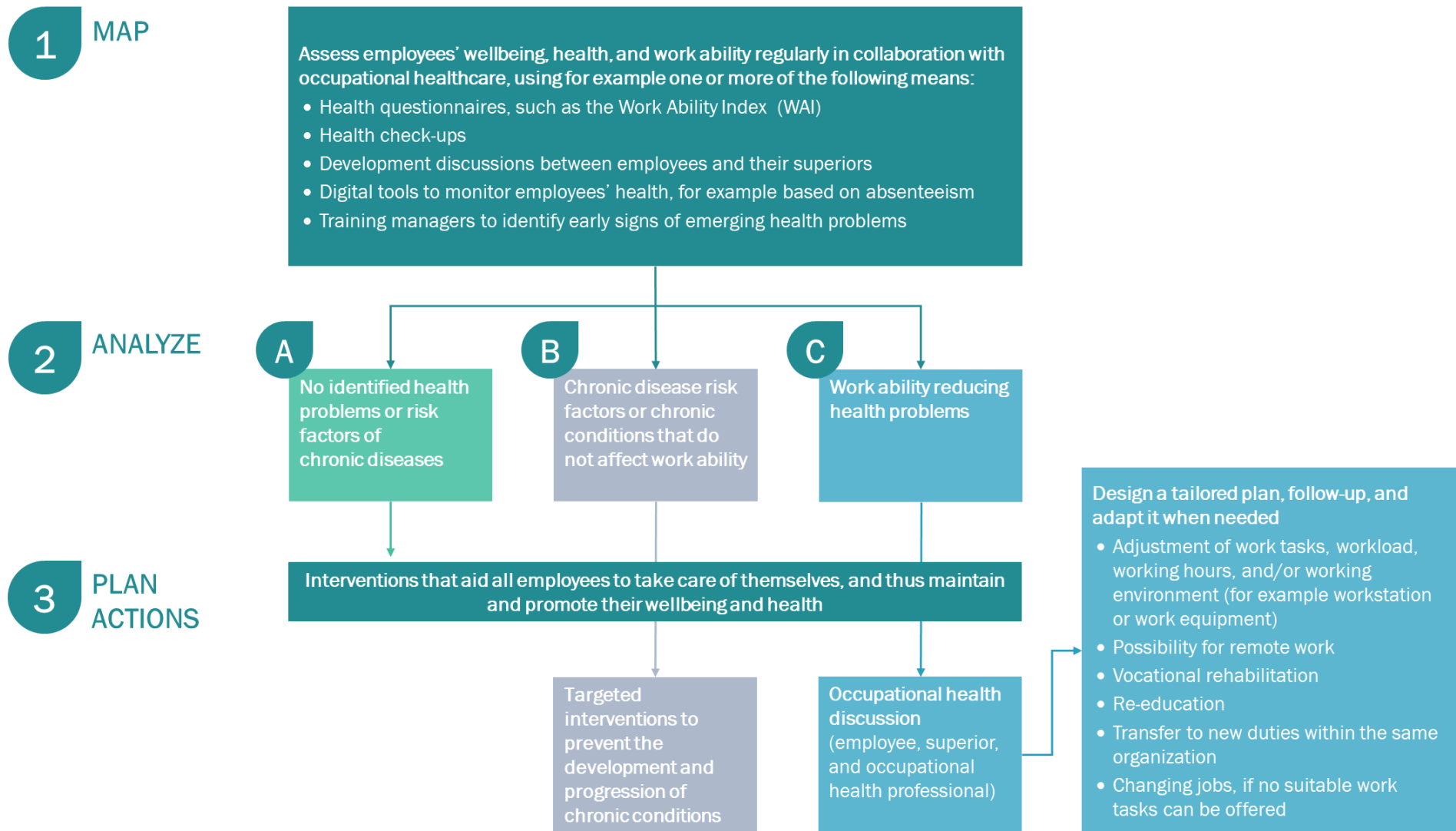


Figure 5. Early identification model for supporting employees' wellbeing, health, and work ability

In supporting the continuation of work of employees with emerged chronic health problems, three key principles were identified: 1) trustful and open communication, 2) tailored solutions, and 3) multidisciplinary support provided by occupational healthcare. Trustful relationship between employees, superiors, and occupational healthcare professionals is the key to early identification of emerging health issues, as it helps employees to disclose them. When health problems emerge, the employee, his/her superior, and/or an occupational health care professional would discuss possibilities the employee has to continue working, and make a plan for needed adjustments to work arrangements and working conditions. The plan would be tailored to fit and support employees' coping and work ability, and updated with regular intervals.

The domains and approaches identified in the interview data formed the structure of the Toolkit for Workplaces. Interventions that were selected to the Toolkit based on the systematic literature reviews ([1.1](#)) were complemented with interventions the interviewees reported, even if no scientific data was available on their effectiveness, if the interventions were considered potentially beneficial and most likely not harmful.

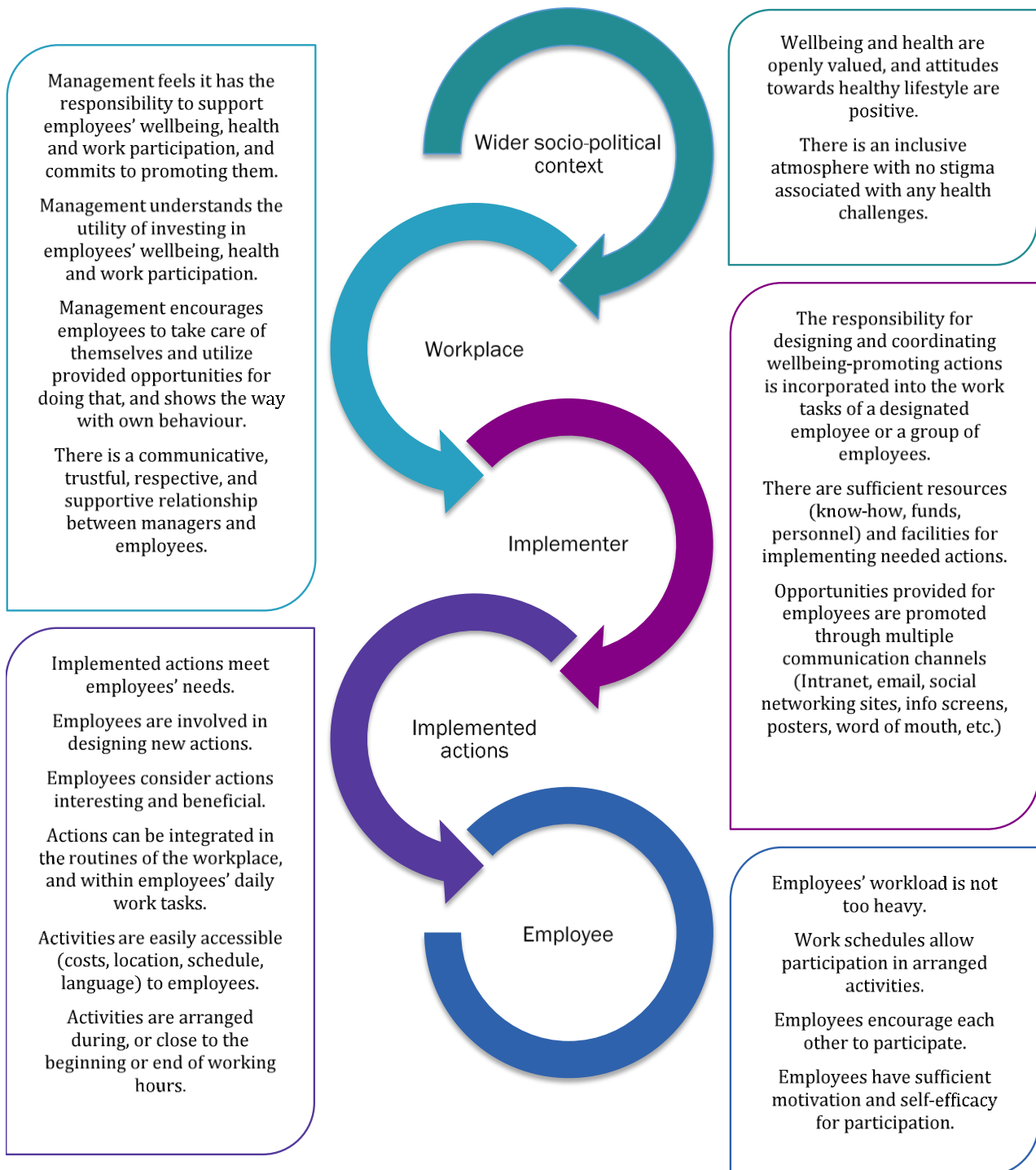
### ***Factors that facilitate implementation and encourage employees to participate***

Factors that were identified to facilitate successful implementation of workplace interventions aiming to promote employees' wellbeing, health, and work participation, and that were found to encourage employees to make use of such interventions are summarized in **Figure 6** employing the framework of Wierenga et al. (2013).

The values, knowledge, and motivation of workplace management were identified as key factors determining whether interventions become implemented or not. If the management does not consider they have a responsibility to support the wellbeing, health, and work participation of their employees, efforts for this are unlikely going to be made. The same applies if the management has a lack of knowledge on effective means, lack of understanding that employees' wellbeing is a mutual benefit of both the employees and the employer, and lack of courage to create and try out new things and to change old customs and policies at the workplace. Workplace culture, and the perceived relevance and ease-of-access of provided interventions, in turn, were recognised to influence whether employees end up participating in or making use of them.

### ***Employers and employees share the responsibility of employees' wellness***

The interviewed managers and occupational health professionals were asked how they see the role and responsibility (over and beyond occupational safety issues) of a workplace in promoting employees' health, preventing the development of chronic health problems, and supporting the work participation of employees with chronic health problems. Several interviewees highlighted that the responsibility is shared between the employer and the employee. The employer was considered as an enabler that can create circumstances that make it easy for employees to adopt and maintain healthy lifestyle patterns at the workplace. Furthermore, the employer can raise employees' awareness of the impact of lifestyle on wellbeing and health, and motivate employees to adopt healthy lifestyle habits. The employer was also considered to have a remarkable role in supporting employees with emerged chronic health problems to continue working by considering how the continuation of work of these employees could be facilitated. Employees, in turn, were considered responsible for making healthy choices and making use of the opportunities their workplaces provide them for taking care of themselves.



**Figure 6.** Factors that facilitate successful implementation of wellbeing, health, and work participation promoting actions at the workplace, and encourage employees to make use of these actions. Adapted from Wierenga et al. (2013) and the results of CHRODIS PLUS Task 8.2 stakeholder interviews.

### ***Benefits for the employer and the employee***

Several interviewees also brought up that workplace health promotion benefits both employers and employees in several ways. It was recognised that a workplace that cares about the wellness of its employees and aids employees to stay healthy has a competitive advantage in the labour market, as it attracts jobseekers and encourages current employees to stay. It was mentioned that the investments employers make to support the wellbeing, health, and work participation of employees pay back in a more satisfied, motivated, and productive workforce. With regard to employees with chronic health problems, the interviewees also highlighted the humane aspects related to supporting these employees. It was mentioned that it would be cruel not to try to help employees to stay at work and within the work community, because work often provides meaningful content to life, and improves an individual's wellbeing in the midst of all worries that health problems bring.

Nevertheless, the interviewees pointed out that supporting the work participation of employees with chronic health problems requires that employers understand the worth of such investments, and accept the fact that employees with health issues may not be as productive as their healthy colleagues. In addition, employers need to have knowledge on *how* to support the coping of these employees.

### **1.3 Behavioural models and theories**

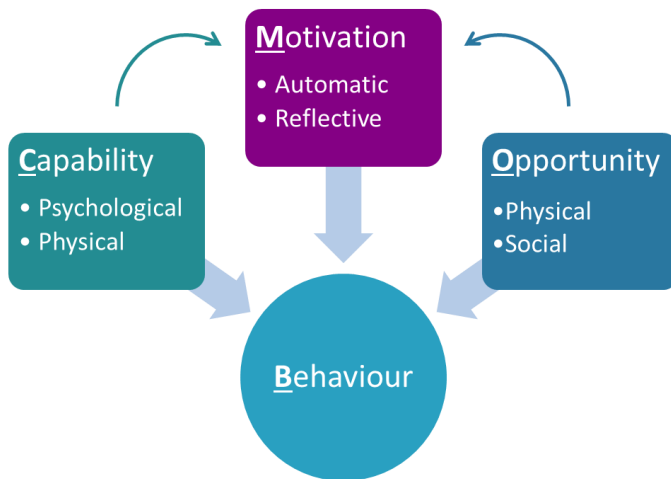
Since many chronic diseases are linked with behaviours, understanding and taking into account the drivers of human behaviour is crucial in the development of solutions to the promotion of health and the prevention, and management of chronic diseases. The behavioural models and theories that guided the development of the CHRODIS PLUS Toolkit for Workplaces are *dual process theories of cognition* (Strack and Deutsch 2004) and the *COM-B model* (Michie et al. 2011) (**Figure 7**).

Psychological dual process theories suggest that decision-making and behaviour result from the interaction of two distinctive cognitive processes: automatic and reflective (Strack and Deutsch 2004). Automatic processes operate fast and intuitively, and require little or no cognitive effort (Kahneman 2011; Marteau et al. 2012; Strack and Deutsch 2004). Hence, they excel in routine situations, such as those related to food choices and eating. Automatic processes, however, are not able to take into account potential consequences of our actions (Kahneman 2011; Marteau et al. 2012). Consequently, they are susceptible to highly rewarding hedonic temptations. Reflective processes, in turn, steer behaviour through deliberate consideration based on personal values, beliefs, and conscious desires, and rely on the evaluation of the probability and worth of potential consequences of various behavioural options (Marteau et al. 2012; Strack and Deutsch 2004). However, for doing this they demand attention and resources for self-regulation (Strack and Deutsch 2004). As opposed to automatic processes, reflective processes are slow, require a lot of cognitive effort, and become easily distracted (Kahneman 2011; Marteau et al. 2012; Strack and Deutsch 2004). Fatigue, hunger, and strong emotions, for instance, can impair the functioning of the reflective system, and shift behaviour-regulation more on the automatic system (Hofmann et al. 2008).

Environmental cues influence cognitive processing (Papies 2016). Even small and seemingly insignificant details in the surrounding choice environment can have the power to steer decision-making (Thaler and Sunstein 2009). Thus, people can be supported in adopting health-protecting behavioural patterns by creating living environments in which it is effortless, attractive, and accepted to make healthy choices.

The COM-B-model identifies three core determinants of behaviour: capability, opportunity, and motivation (Michie et al. 2011). Capability refers to the knowledge and skills that are necessary for engaging in certain behaviour. Opportunity refers to external factors, both physical (i.e., environment) and social (i.e., cultural

milieu), that make a behaviour possible or prompt it. Motivation refers to the brain processes, both automatic (i.e., habitual processes, emotional responding, and impulses) and reflective (i.e., analytical decision-making, evaluations, and plans), that energize and direct behaviour (Michie et al. 2011).



**Figure 7.** Determinants of behaviour according to the COM-B-model. Adapted from Michie et al. (2011).

#### 1.4 Practical considerations

In addition to the above-mentioned elements, also some practical considerations guided the development of the CHRODIS PLUS Toolkit for Workplaces. According to these, the practical means that would be selected to the Toolkit ought to meet the following criteria.

The means should be:

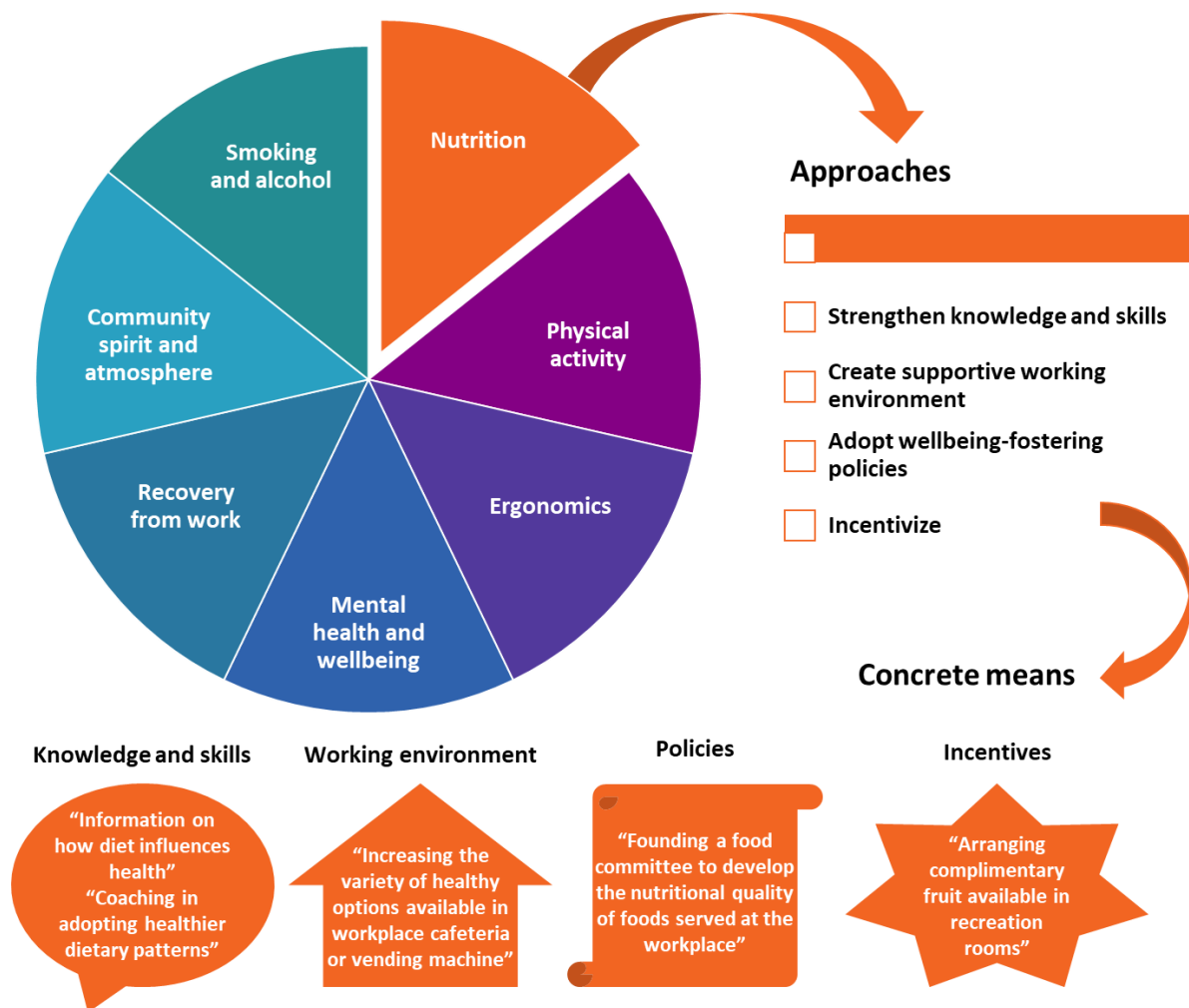
- suitable for a workplace setting
- concrete and practical, and their implementation described in sufficient detail to facilitate execution by workplace management
- at least some of them should be effortless and inexpensive to implement

Furthermore, the core idea of the Toolkit is that instead of targeting specific employee groups, such as individuals with certain chronic conditions or their risk factors, it provides suggestions for means that benefit equitably all individuals independent of their work ability and health status. This aids reducing stigma related to chronic health problems, and sends the message that inclusive working conditions that protect and promote wellbeing, health, and work participation should be the default at all workplaces. For example, if there is health-promoting food of high nutritional quality available in the workplace cafeteria, it enables employees with diabetes or cardiovascular diseases to make food choices that support the management of their conditions. However, availability of healthy food facilitates also other employees to adopt and maintain dietary habits that improve alertness and productivity and aid them stay healthy.

### 1.5 Construction of the Toolkit

The content of the Toolkit was categorised into seven domains, each important to overall wellbeing and health, and each of which a workplace has the potential to advance (**Figure 8**). The domains are: 1) nutrition, 2) physical activity, 3) ergonomics, 4) mental health and wellbeing, 5) recovery from work, 6) community spirit and atmosphere, and 7) smoking cessation and reduction of excess alcohol consumption. Each domain includes four types of approaches by which employees’ wellbeing, health, and work participation can be promoted within a given domain. The approaches target: 1) knowledge and skills, 2) working environment, 3) policies, and 4) incentives. Under each approach, suggestions for concrete means are provided.

The first version of the Toolkit comprised altogether 120 various concrete means. In addition, the Toolkit included two appendices. The first appendix provided a checklist form that enables workplaces to map which Toolkit domains have already been paid attention to, and which approaches and means adopted in use at the workplace, as well as creating a list of feasible and potentially beneficial means that are selected for future implementation. The second appendix provided additional information on factors that have been identified to facilitate the implementation of wellbeing, health, and work participation promoting actions at the workplace, and factors that have been found to encourage employees to make use of such actions.



**Figure 8.** The structure of the Toolkit and some examples of the means within each approach

## Section 2 – Pilot

This section focuses on:

1. the methodology of the pilot of the CHRODIS PLUS Toolkit for Workplaces
2. the findings of the pilot

### 2.1 Aims

The aims of the pilot of the CHRODIS PLUS Toolkit for Workplaces were:

- to evaluate the usability, utility, and content of the Toolkit based on questionnaire data collected from different types of workplaces in various European countries.
- to evaluate the feasibility of the Toolkit, when workplaces use it independently without major external support.

### 2.2 Materials and methods

#### *Preparation and course of the pilot*

The pilot was coordinated by THL and conducted in collaboration with the following partners of Task 8.2: FINCB (Italy), RIVM (the Netherlands), SAS/CSJA (Spain), TUD (Germany), and Klaipeda's City Public Health Bureau (Lithuania). THL was responsible for designing and scheduling the pilot, for producing needed materials (an invitation letter, [Annex 3](#); a slide set introducing the pilot to participants, [Annex 4](#); and questionnaires with their cover letters, [Annexes 5–8](#)) and for collecting and analysing data. The design of the pilot was presented to and discussed with involved partners in CHRODIS PLUS WP8 pre-conference workshop in Budapest in May 2019, and in a teleconference arranged with partners that were not able to participate in the Budapest workshop. Later, questionnaire outlines were circulated among partners. Partners were invited to review and comment pilot design and questionnaires along the preparation. Received comments were carefully considered, and the pilot was refined accordingly. Involved partners contributed to the pilot also by helping in translating materials into their own languages, and by translating data collected in their own countries into English. Each partner was responsible for recruiting at least one pilot workplace in their own country, and for acting as the CHRODIS PLUS contact for the workplace(s) they recruited.

The pilot was conducted in a setting that resembles time after CHRODIS PLUS. This means that the pilot workplaces did not receive major external support for the use of the Toolkit or the implementation of Toolkit means. Instead, the workplaces were merely provided the Toolkit per se and a concise information slide set ([Annex 4](#)). The slide set contained a brief introduction of the CHRODIS PLUS initiative and the Toolkit for Workplaces, suggestions on how to explore the Toolkit, the course and schedule of the pilot, and the tasks participants were expected to complete during the pilot. Otherwise, pilot workplaces were supposed to familiarize themselves with the Toolkit, and potentially choose, plan, and implement its means on their own. This protocol was chosen, because it enabled the evaluation of the feasibility of the Toolkit when used independently – the way workplaces are likely to use it in the future.

**Table 3** presents the course and approximate timeline of the pilot. The pilot involved two questionnaires (baseline, [Annex 6](#); follow-up, [Annex 8](#)) that the contact persons of participating workplaces were asked to complete. The contact persons represented predominantly workplace management and human resources. The baseline questionnaire was completed at the beginning of the pilot (August 2019 – January 2020) and the follow-up questionnaire approximately 6 months later at the end of the pilot (February 2020 – August 2020). Between the questionnaires, pilot workplaces had time to independently put into practice and collect experiences on the implementation of their chosen Toolkit means. Implementing one or more means was recommended, yet voluntary. The workplace was responsible for covering possible implementation costs.

**Table 3.** The course and schedule of the pilot

Month	0	1-2	3-5	6
Activity	Toolkit is provided to the HR/ management of pilot workplaces	Baseline questionnaire <ul style="list-style-type: none"> <li>· Evaluation of Toolkit</li> <li>· Plans to implement Toolkit means</li> </ul>	Workplaces independently implement the Toolkit means they selected	Follow-up questionnaire <ul style="list-style-type: none"> <li>· Implemented means</li> <li>· Experiences of implementation</li> </ul>

### **Measurements**

The baseline questionnaire ([Annex 6](#)) contained background questions about the workplace (field of operation, size, age structure and gender distribution of employees, and percentage of blue-collar and white-collar employees). In the baseline questionnaire, respondents were asked to evaluate the usability and utility of the Toolkit, as well as the usefulness, comprehensiveness, feasibility, and level of detail of each of its seven domains. In addition, respondents were asked to share their intentions to implement one or more of the concrete means suggested in the Toolkit at their workplaces. In the follow-up questionnaire ([Annex 8](#)), respondents were asked whether their workplaces had implemented any of the concrete means suggested in the Toolkit, and if yes, to detail which means were implemented and for how long. In addition, respondents were asked to share their experiences of the implementation (facilitators, barriers, needed investments, and involved personnel) and to describe potentially perceived effects. Both the baseline and the follow-up questionnaire also provided the workplaces an opportunity to provide open feedback and suggestions for improving the Toolkit.

The questionnaires were translated into target languages and converted to online form using the Questback® tool ([www.questback.com](http://www.questback.com)). At the beginning of both questionnaires, pilot participants were asked to give their informed consent that the data they provide can be used in the development of the Toolkit and in reporting the results of the pilot. Without giving their consent, respondents were not able to proceed in the questionnaire. Respondents were informed that the questionnaire is completed anonymously, and that collected data is treated confidentially according the EU General Data Protection Regulation (GDPR). It was explained that collected data is stored in protected files, which only the members of the CHRODIS PLUS research group can access, and that the data will not be shared with any external parties. In addition, respondents were communicated that collected data is analysed and the results of the pilot reported on a group level, so that it is not possible to identify individual respondents or their organizations.



## 2.3 Results

### *Participants*

Ten medium (50–249 employees) to large ( $\geq 250$  employees) workplaces from six European countries agreed to participate in the pilot (**Table 4**). The pilot sample included both workplaces that had participated in the earlier conducted interviews ( $n=6$ ) ([1.2](#)), and new workplaces ( $n=4$ ).

**Table 4.** Number of workplaces that agreed to participate in the pilot and that completed the baseline and follow-up questionnaire

Country	Workplaces	Completed questionnaires	
		Baseline	Follow-up
Finland	3	3	1
The Netherlands	2	2	2
Spain	2	2	2
Italy	1	1	1
Lithuania	1	1	0
Germany	1	1	1
<b>Total</b>	<b>10</b>	<b>10</b>	<b>7</b>

Among the pilot workplaces were both public and private sector organizations and the workplaces represented various fields (**Table 5**). Of the personnel of these workplaces the proportion of employees aged 50 years or older varied between 24–83%, the median being 30%. The share of male employees ranged from 40 to 88% with a median of 61%, and the share of blue-collar employees from zero to 91% with a median of 50%.

**Table 5.** Fields of operation of the pilot workplaces

Field
Aviation
Engineering
Design and consulting
Daily consumer goods
Food industry
Manufacturing industry
Laundry & cleaning industry
Central government
Public administration
Culture

All pilot workplaces reported that they had already carried out actions to support employees' wellbeing and health within several Toolkit domains. At each workplace, measures had been implemented within five to seven Toolkit domains. The median number of domains that had been focused on was six. Domains that all pilot workplaces had addressed somehow were physical activity, ergonomics, and mental health and wellbeing (**Table 6**). Yet, eight workplaces felt that more could be done to further support employees. The number of domains within which further actions were considered possible ranged from one to seven per workplace, the

median being 6.5. Domains within which the greatest number of workplaces thought employees could be supported more were mental health and wellbeing and recovery from work.

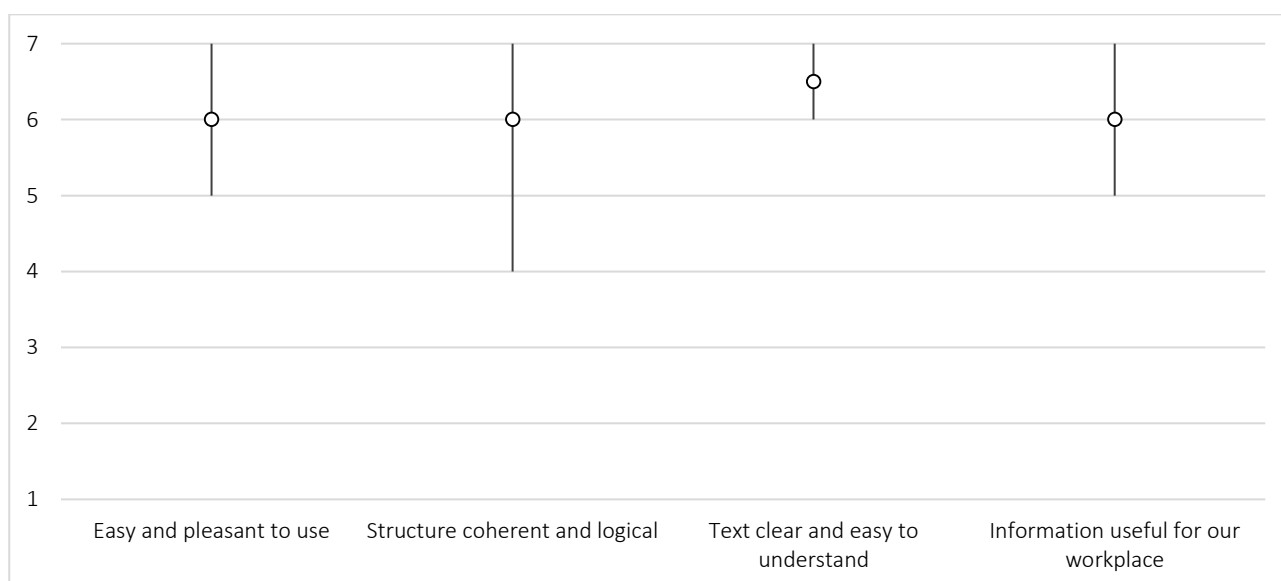
**Table 6.** Toolkit domains within which pilot workplaces had carried out actions and domains within which further actions were considered possible at baseline

Toolkit domain	Workplaces (n)	
	Actions implemented*	Further actions possible*
Nutrition	8	5
Physical activity	10	5
Ergonomics	10	6
Mental health and wellbeing	10	7
Recovery from work	8	7
Community spirit and atmosphere	9	6
Smoking cessation and reduction of excess alcohol consumption	6	5

\*If at least one respondent from the workplace had chosen the alternative.

**Evaluations of the overall usability and utility of the Toolkit**

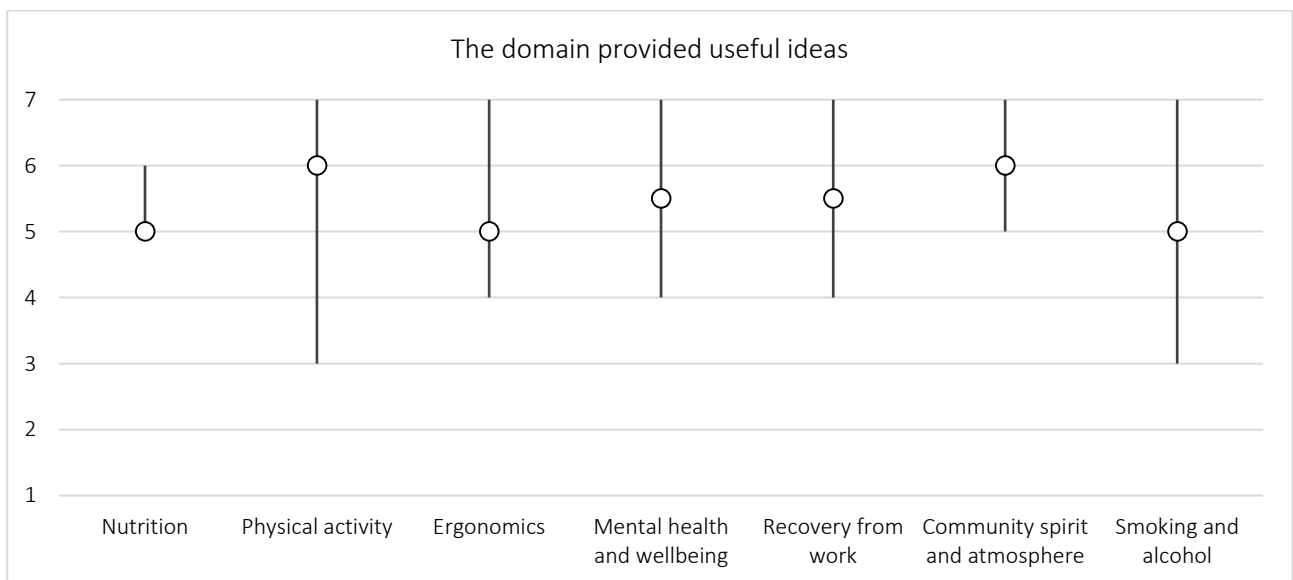
The overall usability and utility of the Toolkit was assessed with four questionnaire items. These items comprised the following statements: 1) *The Toolkit is easy and pleasant to use*, 2) *The structure of the Toolkit is coherent and logical*, 3) *The text in the Toolkit is clear and easy to understand*, and 4) *The information the Toolkit contains is useful for our workplace*. The respondents gave their ratings on a seven point Likert scale by selecting the alternative that best described their opinion (1 = *totally disagree*, 7 = *totally agree*). If more than one person from a workplace completed the questionnaire, the ratings of all respondents of the workplace were averaged, and the mean value was used as the rating of that particular workplace. The average (median) ratings of the overall usability and utility of the Toolkit ranged between 5.8–6.5 (6–6.5). **Figure 9** presents the distributions and medians of the ratings.



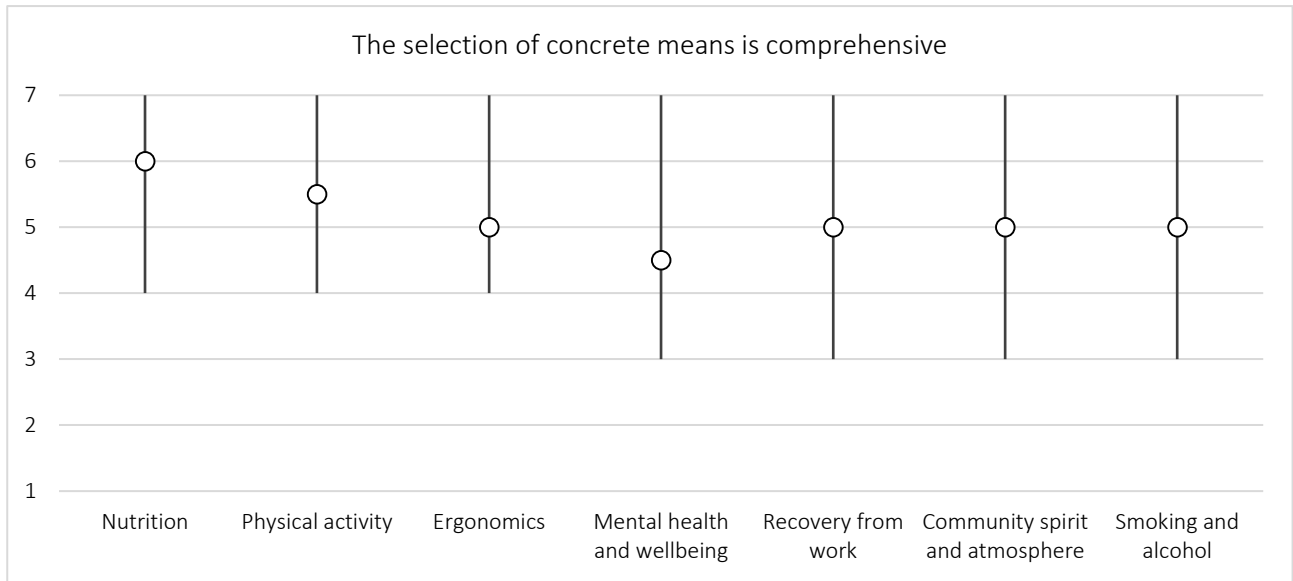
**Figure 9.** The usability and utility of the Toolkit as a whole: medians (o) and distributions of the ratings. n = 10, scale: 1 = totally disagree, 7 = totally agree.

**Evaluations of the usefulness, comprehensiveness, feasibility, and level of detail of each Toolkit domain**

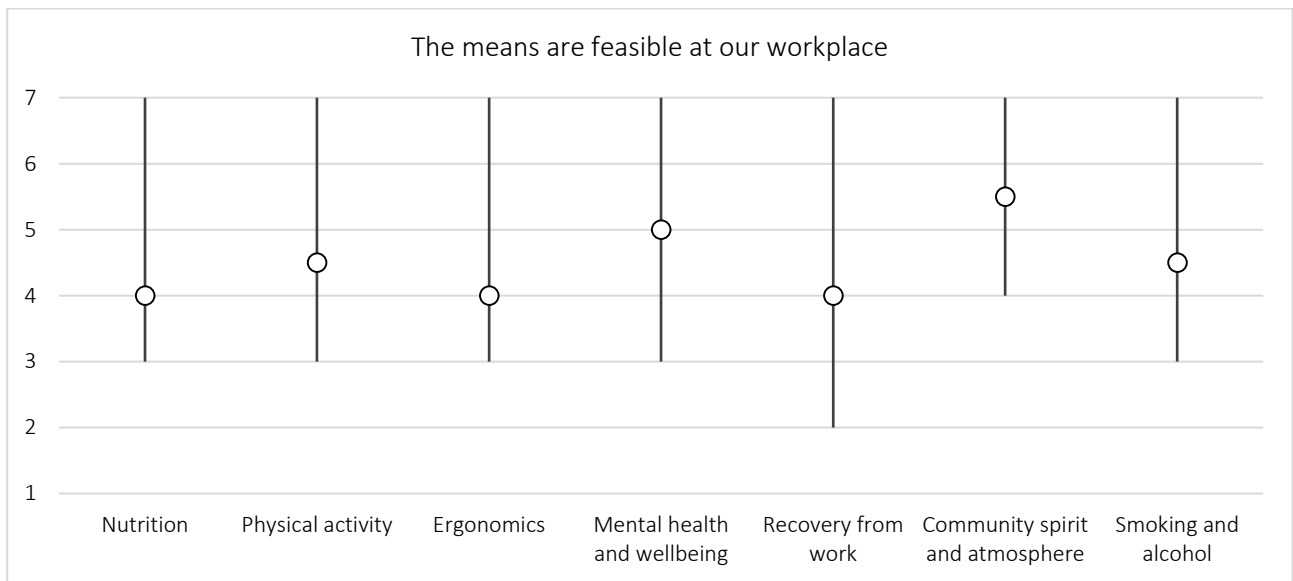
The usefulness, comprehensiveness, feasibility, and level of detail of the content of each Toolkit domain was assessed with four questionnaire items. These items comprised the following statements: 1) *The domain provided me useful ideas on how to promote employees' [name of the domain, e.g., recovery from work]*, 2) *The selection of concrete means is comprehensive*, 3) *The means are feasible at our workplace*, and 4) *The means are described detailed enough to understand their idea and to know how to proceed to put them into practise*. Similar to the previous section, the respondents gave their ratings on a seven point Likert scale by selecting the alternative that best described their opinion (1 = *totally disagree*, 7 = *totally agree*). If more than one person from a workplace completed the questionnaire, the ratings of all respondents of the workplace were averaged, and the mean value was used as the rating of that particular workplace. **Figures 10–13** present the distributions and medians of the ratings of the usefulness, comprehensiveness, feasibility, and level of detail of the Toolkit by domain. Overall, the average (median) ratings ranged between 4.5–5.8 (4–6).



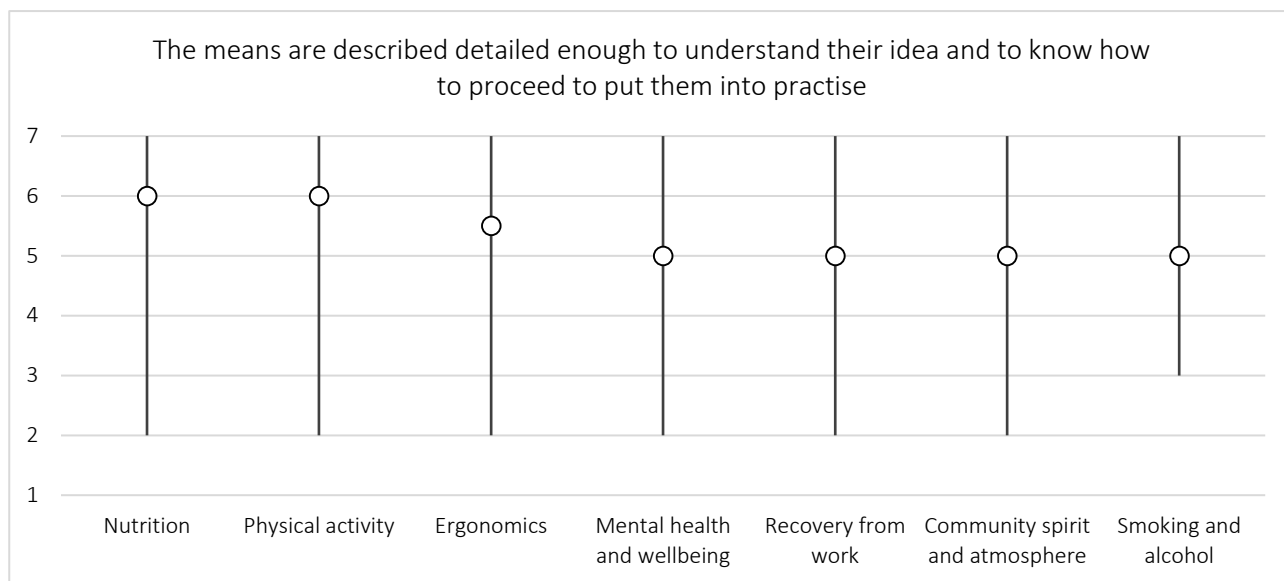
**Figure 10.** The usefulness of the content of each Toolkit domain: medians (o) and distributions of the ratings. n = 10, scale: 1 = totally disagree, 7 = totally agree.



**Figure 11.** The comprehensiveness of each Toolkit domain: medians (o) and distributions of the ratings. n = 10, scale: 1 = totally disagree, 7 = totally agree.



**Figure 12.** The feasibility of means included in each Toolkit domain: medians (o) and distributions of the ratings. n = 10, scale: 1 = totally disagree, 7 = totally agree.



**Figure 13.** The level of detail in which means in each Toolkit domain are described: medians (o) and distributions of the ratings. n = 10, scale: 1 = totally disagree, 7 = totally agree.

***Pilot participants’ intentions to implement Toolkit means at baseline***

When pilot workplaces were asked which Toolkit means they had considered for implementation, they described both means that already had been implemented and means that were planned to be implemented in the future. The level of detail in which intentions were described varied, as workplaces depicted their plans alternately on the level of Toolkit domain, approach, or concrete means.

All ten pilot workplaces reported having considered at least some of the means suggested in the Toolkit. However, there was a remarkable variation in the number of domains and diverse approaches and means mentioned. The number of domains workplaces considered varied between 2–7, with a median of six domains per workplace. The average ( $\pm$ STD) number of interventions workplaces described on the level of approach and/or concrete means was  $19 \pm 30$  (range 2–102), with a median of nine interventions per workplace. Three workplaces declared that the majority of Toolkit means already are in use in their organizations, and if not, are planned to be implemented. The remaining seven workplaces had not considered means quite as extensively. Analysing the free-form descriptions these seven workplaces provided of means that had been or were planned to be implemented, applications of altogether 42 various Toolkit means could be identified (Table 7). These cover 35% of the entire selection of various means included in the Toolkit (n=120), and represent all seven Toolkit domains. In addition, some means and higher-level targets were mentioned that are not specifically suggested in the Toolkit.

The highest number of various means were addressed within the domains physical activity (n=14), mental health and wellbeing (n=13), and nutrition and ergonomics (n=7). These Toolkit domains also provide the greatest selection of various means. Considering the proportion of means that were addressed from the selection of each domain, the relatively most popular domains were mental health and wellbeing, community spirit and atmosphere, and ergonomics with 76%, 60%, and 44% of their means addressed, respectively.

**Table 7.** Specific Toolkit means pilot workplaces (n=7) mentioned having considered/implemented at baseline

Domain, <i>approach</i> , and concrete means
<b>2. Nutrition</b> <b>2.1 Strengthen knowledge and skills</b> Measurements Education through lectures and delivering information Digital support Access to dietitian <b>2.2 Create supportive working environment</b> Physical environment/Availability: Facilities for having packed lunch Physical environment/Labelling: Nutritional labels <b>2.4 Incentivize</b> Complimentary fruit
<b>3. Physical activity</b> <b>3.1 Strengthen knowledge and skills</b> Measurements Sharing favourite movements: Break exercise videos Face-to-face support Prompt/Stair-use: Directional signs (footprints leading to stairs mentioned) <b>3.2 Create supportive working environment</b> Physical environment/Reducing sedentary time: Working by standing Physical environment/Reducing sedentary time: Exercise equipment Physical environment/Increasing stair-use: Attractive stairwell (paintings and motivational drawings) Physical environment/Active meetings: Rearranged meeting room Physical environment/Active commuting and exercise at work: Bike racks <b>3.3 Adopt wellbeing-fostering policies</b> Physical activity breaks for all Recreational committee Active meetings a norm <b>3.4 Incentivize</b> Exercise during working hours Sports groups
<b>4. Ergonomics</b> <b>4.1 Strengthen knowledge and skills</b> Time management training Communication skills Individual supervision of work coaching for managers Group-based supervision of work coaching for employees <b>4.2 Create supportive working environment</b> Physical environment: Ergonomic equipment Physical environment: Shared responsibility to tidy up <b>4.3 Adopt wellbeing-fostering policies</b> Flexible work arrangements
<b>5. Mental health and wellbeing</b> <b>5.1 Strengthen knowledge and skills</b> Assessment of mental health and wellbeing Gentle physical activity (yoga mentioned) Coping skills Communication skills (same as in 4.1) Time management skills (same as in 4.1) <b>5.2 Create supportive working environment</b> Physical environment: Silent space Social working environment: Supportive, inclusive, and respectful atmosphere

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**Domain, approach, and concrete means**


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**5.3 Adopt wellbeing-fostering policies**

Bottom-up policy development

Significance of own work

Flexible work arrangements (same as in 4.3)

Time off

**5.4 Incentivize**

Recreational clubs

Cultural activities

**6. Recovery from work****6.1 Strengthen knowledge and skills**

Education (lecture about rest, stress, and recovery)

Coping skills (same as in 5.1)

**6.2 Create supportive working environment**

Physical environment: Silent space (same as in 5.2)

Social working environment: Shared events (outdoor activities mentioned)

**6.3 Adopt wellbeing-fostering policies**

Flexible work arrangements (same as in 4.3 and 5.3)

**7. Community spirit and atmosphere****7.1 Strengthen knowledge and skills**

Assessment of perceived work climate

Communication skills (same as in 4.1 and 5.1)

Group-based supervision of work coaching for employees (same as in 4.1)

**7.2 Create supportive working environment**

Social working environment: Constructive communication culture

Social working environment: Supportive, inclusive, and respectful atmosphere

Social working environment: Shared events (outdoor activities mentioned) (same as in 6.2)

**8. Smoking cessation and reduction of excess alcohol consumption****8.2 Create supportive working environment/ 8.3 No smoking or alcohol**

Smoking area

When pilot workplaces were asked about reasons that determine whether means actually become implemented, the following factors were mentioned: the management of the workplace supports implementation (n=9 workplaces), the means are feasible (n=8) and needed (n=6), and needed resources (know-how, funding, time, personnel, materials, and/or facilities) for implementation are available (n=6).

***Implemented means and experiences of implementation at follow-up***

Seven workplaces completed the follow-up questionnaire (**Table 4**), which means that three workplaces (30%) were lost to follow-up. Four of the seven workplaces reported that they had implemented Toolkit means during the pilot. Two workplaces had intended to implement some means, but eventually did not. Reasons for this were lack of resources, such as time (n=2) or personnel (n=1), lack of management's support (n=1), and the covid-19 pandemic (n=1). One workplace decided already at baseline not to implement any means.

All four workplaces that implemented Toolkit means during the pilot had also participated in the stakeholder interviews that were conducted during the background work of the Toolkit (**1.2**). At follow-up, these workplaces carried out interventions predominantly within the same domains they had addressed at baseline, yet some differences could be observed (**Table 8**). Two workplaces ended up implementing interventions in domains they had not addressed at baseline, and two workplaces did not implement interventions in all the domains they had addressed at baseline. Domains that all workplaces addressed at follow-up were nutrition,

ergonomics, and mental health and wellbeing. Apart from nutrition, these domains were the same as at baseline.

**Table 8.** Domains pilot workplaces (n=4) addressed at baseline and follow-up

Domain	Workplace 1		Workplace 2		Workplace 3		Workplace 4	
	BL	FU	BL	FU	BL	FU	BL	FU
Nutrition	x	x	-	x	x	x	x	x
Physical activity	x	x	x	x	x	x	x	-
Ergonomics	x	x	x	x	x	x	x	x
Mental health and wellbeing	x	x	x	x	x	x	x	x
Recovery from work	x	x	-	x	x	-	x	x
Community spirit and atmosphere	x	x	-	-	x	x	x	-
Smoking cessation and reduction of excess alcohol consumption	-	x	-	-	-	-	x	-

BL = baseline, FU = follow-up, blue = reported at follow-up but not at baseline, grey = reported at baseline but not at follow-up

What comes to the total number of interventions implemented at follow-up, the mean ( $\pm$ STD) number of interventions was  $15 \pm 12$  (range 4–34), and the median 10 interventions per workplace. Three of four workplaces reported a greater number of interventions at follow-up compared to baseline (Table 9).

**Table 9.** Number of interventions pilot workplaces (n=4) reported at baseline and follow-up

	Workplace 1		Workplace 2		Workplace 3		Workplace 4	
	BL	FU	BL	FU	BL	FU	BL	FU
Interventions (n)	14	34	10	11	7	9	15	4

BL = baseline, FU = follow-up

Considering the variety of Toolkit means pilot workplaces implemented from each domain, the most popular domains at follow-up were nutrition (n=13), physical activity (n=13), mental health and wellbeing (n=12), and ergonomics (n=9) (Table 10). These domains belonged to the top four also at baseline. Only their order was different. What comes to the relative popularity of domains, measured as the percentage of means that were implemented from the selection of each domain, the top three domains were mental health and wellbeing, ergonomics, and smoking cessation and reduction of excess alcohol consumption. Mental health and wellbeing and ergonomics were in the top three also at baseline. Overall, the variety of means implemented increased in the domains of nutrition, physical activity, ergonomics, and smoking cessation and reduction of excess alcohol consumption.

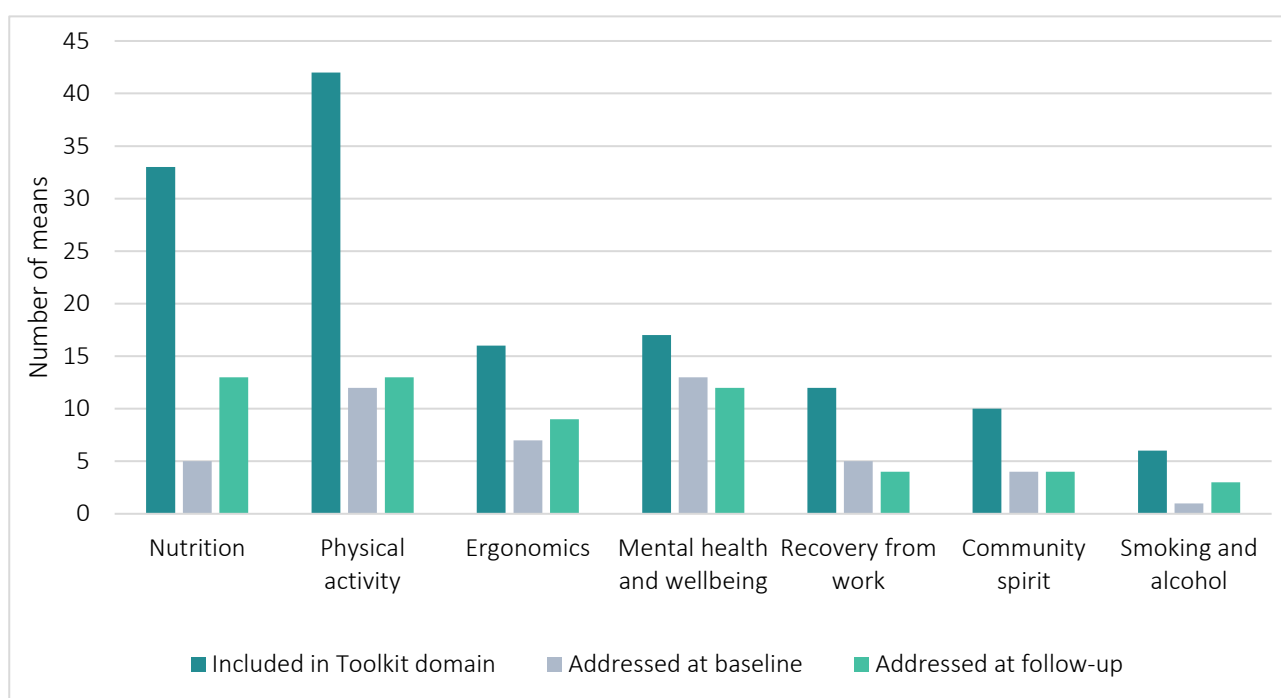
Taking all domains into account, altogether 49 various Toolkit means were implemented at pilot workplaces (n=4) at the end of the pilot, covering 41% of the entire selection of diverse Toolkit means and all seven Toolkit domains. The coverage was eleven percentage points higher compared to baseline at these workplaces. Figure 14 illustrates the number of various means included in each Toolkit domain, and the number of various means pilot workplaces addressed per domain at baseline and follow-up.



**Table 10.** Various Toolkit means pilot workplaces (n=4) addressed at baseline and follow-up, numbers and percentages of means per domain

Domain	Baseline		Follow-up	
	n	%	n	%
Nutrition	5	15	13	39
Physical activity	12	29	13	31
Ergonomics	7	44	9	56
Mental health and wellbeing	13	76	12	71
Recovery from work	5	42	4	33
Community spirit and atmosphere	4	40	4	40
Smoking cessation and reduction of excess alcohol consumption	1	17	3	50

n = number of various means mentioned, % = percentage of the selection of Toolkit means included in the domain



**Figure 14.** Number of various means included in each Toolkit domain and addressed by pilot workplaces (n=4) at baseline and follow-up

Besides means that were implemented, pilot workplaces were also asked about their experiences of the implementation process as regards facilitators and challenges, needed investments, and involved personnel. All four workplaces mentioned the feasibility of means and management’s support as factors that facilitate implementation. Three workplaces reported that implementation is facilitated when the means are accepted by employees and when there is motivation as well as time and personnel available for the implementation. Other facilitators workplaces mentioned were the need for the means being implemented and the availability of required funding, materials and/or facilities (n=2). What comes to factors that challenge the implementation, workplaces mentioned lack of funding and time (n=2), lack of needed materials and/or facilities (n=1), and lack

of information on how to implement the means (n=1). In addition to these, covid-19 pandemic was mentioned to have challenged the implementation (n=1).

Three out of four workplaces reported that implementing means had required new monetary investments, for example in the form of hiring new workforce or procurement of materials or external services. Persons involved in the implementation process (designing, organizing, and executing chosen means) were mainly managers, yet also advisors and external service providers, health and safety personnel, secretaries, and specific steering committees or councils were mentioned to have been involved in the implementation process. Furthermore, one workplace mentioned that it had been useful to have all employees involved in the process.

All four workplaces reported that they had maintained implemented means over three months, and that they planned to continue maintaining them. Three workplaces also reported having noticed some effects the implemented means had yielded. Among the observed effects were increased health awareness and interest in healthier behaviours (e.g., healthy eating, working by standing), changes in behaviour (e.g., physical activity, smoking) and in health indicators (weight loss), and reduction in absenteeism. Other observed effects were a more supportive atmosphere at the workplace and job seekers' willingness to work at the workplace. These effects were detected based on the observations and impressions of the respondents, on conversations and comments they had heard, and/or on statistics (absenteeism, staff turnover). No adverse effects were reported.

Finally, all seven workplaces that completed the follow-up questionnaire reported that they were planning to implement one or more new Toolkit means after the pilot.

### ***Open feedback***

Workplaces that piloted the Toolkit found it comprehensive, detailed, and easy-to-read a guide that is useful for employers and their stakeholders, and that covers all aspects of wellbeing, health, and work participation. The Toolkit was considered a great initiative that can be referred to and used in justifying why and how the health and employability of employees should and could be promoted. Studying the Toolkit was considered interesting, and it was found to stimulate in sharing ideas and possibilities and in creating action plans. It was also mentioned that the Toolkit could be useful for so-called employability advisors, professionals that advise employers on health promotion at the workplace. It was suggested that after selecting Toolkit means to be implemented at the workplace the employability advisor and the employer could jointly design the implementation of selected means.

Among the open feedback was also some concrete suggestions for improvement. It was wished that advice on how to reach employees with immigrant background could be included in the Toolkit, and that means for overcoming challenges related to working in shared working spaces would be added. Furthermore, links to freely available health promotion materials (posters, leaflets, etc.) that workplaces could use were suggested to be added.

The received feedback also reflected the diverse needs of various user groups. Among the suggestions for improvement were wishes to have a shortened Toolkit but also a more extensive version of the Toolkit. Managers were mentioned as a user group that has very little time and that would benefit from a more concise version that briefly summarizes the purpose of the Toolkit. On the other hand, those that are responsible for the actual implementation of workplace interventions, would likely benefit from a more elaborate version with step by step implementation instructions and materials for each of the means included in the Toolkit.

## Section 3 – Further development of the Toolkit

This section focuses on:

1. the refinement of the Toolkit based on the findings of the pilot

Based on the feedback collected with the pilot questionnaires as well as comments received from Task 8.2 partners, the Toolkit was complemented and refined to its final format ([Annex 9](#)). The key changes made to the content of the Toolkit were the inclusion of seven new concrete means and a third appendix. The new means complemented the following four domains: nutrition, ergonomics, recovery from work, and community spirit and atmosphere. The third appendix provides an example of a more comprehensive protocol for identifying and finding solutions to employees' potential health problems early on. In addition, a section was added to the introduction that highlights the shared responsibility of employees and employers in the promotion of employees' wellbeing, health, and work participation. Furthermore, minor text editing and content updates were made throughout the document. After the pilot, the Toolkit was also translated into three additional languages: French, Hungarian, and Danish.

Another modification that was made was the inclusion of references to the CHRODIS PLUS Training Tool for Managers to highlight how the two tools complement each other. A specific page was added to the beginning of the Toolkit that introduces the CHRODIS PLUS Workbox on Employment and Chronic Conditions, and its two tools, the Training Tool for Managers and the Toolkit for Workplaces. In addition, a shaking hands icon was added to the Toolkit to indicate sections related to which more information is available in the Training Tool. Specifically, numbers 1 and 3 in the symbol refer to equivalent Training Tool sections, and the letters I and A refer to introduction and appendix, respectively.

Following the findings of the pilot that there is a need for more personalized solutions for various user groups, a decision was made to look for possibilities to create a web-based version of the Toolkit besides the more traditional pdf version. Providing personalized versions in traditional print format require the production of several distinct versions of the Toolkit with various contents. Online applications, in turn, are more flexible and provide the opportunity to include features that allow the personalization of contents according to users' needs. In the case of the Toolkit this could be done for example through features that allow filtering Toolkit means according to domains and approaches, and by providing the user the opportunity to collect appealing means to a "shopping cart" and print the selected means out or share them via email. An Italian ICT company Sinexia S. r. l. ([www.sinexia.it](http://www.sinexia.it)) was chosen to conduct the work.

In conclusion, by the end of the CHRODIS PLUS project in November 2020 there will be both a printable pdf version and a web-based version of the Toolkit including 127 various concrete suggestions for means to promote employees' wellbeing, health, and work participation. The Toolkit will be freely available in ten European languages (English, German, French, Italian, Spanish, Dutch, Hungarian, Lithuanian, Danish, and Finnish). The production of the web-based version and various translations were activities beyond the grant agreement. These steps were decided to be taken, since their necessity for effective dissemination and implementation became evident during the Toolkit development process, and since the partners of Task 8.2 were motivated and able to provide help in the translation work.

## Section 4 – Assessment of strengths and limitations

The main success of CHRODIS PLUS Task 8.2 is the final output, the Toolkit for Workplaces, that provides information on the benefits of and concrete means for supporting employees' wellbeing, health, and continuation of work. An important strength of the Toolkit lies in its thorough development process. The Toolkit was constructed based on comprehensive literature studies, dozens of stakeholder interviews, psychological models and theories of human behaviour, and practical considerations relevant for workplaces. Further strengths of the Toolkit are its translation into ten languages and conversion into web-based form.

The Toolkit was reviewed and piloted by ten workplaces in six European countries, and refined according to their feedback. Overall, the workplaces found the Toolkit useful, well constructed, readable, and sufficiently detailed. All ten pilot workplaces found concrete means from the Toolkit that they considered implementing. This indicates that the Toolkit is adaptable to and provides feasible content for different types of workplaces. Four workplaces even succeeded in implementing means from the Toolkit during the relatively short pilot period, and intended to continue maintaining the implemented means. These workplaces used a greater variety of Toolkit means, and three of them reported more implemented interventions at the end of the pilot compared to baseline. This suggests that the Toolkit is simple enough a tool to be used independently, and provides sufficient information for workplaces to proceed from plans to action. At follow-up, seven workplaces reported intentions to implement new Toolkit means after the pilot.

Promoting employees' mental health and wellbeing appeared important for the pilot workplaces both at baseline and at follow-up. All workplaces had addressed this domain already before the pilot, and continued doing so at follow-up. Mental health and wellbeing was the most popular domain also when the absolute and relative variety of means, which workplaces implemented per domain, was considered. Other commonly addressed domains were physical activity, nutrition, and ergonomics. One probable explanation for these findings is that these four Toolkit domains provide the widest selection of suggested means. It may also be that these domains are relatively easy to address, because there are plenty of concrete and rather straightforward actions that can be taken to promote employees wellness within these domains.

An interesting finding was that all four workplaces that ended up implementing Toolkit means during the pilot had been involved in the stakeholder interviews conducted during the groundwork of the Toolkit (1.2). In these interviews, participants reflected the responsibility of employers to promote employees health, prevent the development of chronic health problems, and support the work participation of individuals with chronic diseases. They also described actions carried out at their workplaces to achieve these goals, and reflected factors that have facilitated and challenged the implementation of these actions. Furthermore, participants discussed ways in which they have encouraged employees to participate in and make the most of the opportunities their workplace provides for promoting wellness. Participation in the interviews may thus have acted as an "intervention" that prompted workplaces to map their situation and plan next steps. In addition, the interviews may have induced self-reflection that increased participants' awareness of factors that facilitate implementation and ways through which employees could be encouraged to participate. These, in turn, may have supported workplaces in designing and implementing interventions successfully. Hence, the use and impact of the Toolkit could potentially be enhanced if stakeholders, such as occupational wellbeing and health professionals, adopted the tool, introduced it to workplaces and supported them in its use. The support could mean for instance mentoring in mapping the baseline situation at the workplace, and could be carried out using the materials of the CHRODIS PLUS Training tool for Managers and with the help of the checklist available in the Toolkit Appendix 1. Future actions could then be designed with the help of the concrete means suggested in

the Toolkit, and by reviewing the Toolkit Appendix 2 that collects factors shown to facilitate successful implementation. To support workplaces and their mentors in getting started, we intend to produce a short introductory video on the Toolkit and the benefits and recommended ways of using it.

Both the results of the stakeholder interviews and the pilot questionnaires highlighted the importance of supportive management in the implementation of interventions. A change requires that the management recognizes its responsibility to take care of its employees, understands that investments in employees' wellness actually are a mutual benefit of both the employees and the workplace, and has the courage to allocate resources for rethinking how the workplace could better support its employees' wellness, work ability, and inclusion in the work community. This highlights the need to raise employers' awareness further of how investments in employees pay back in the long term, and strengthen their knowledge on what can be done to achieve a healthier workforce.

Besides successes, the work of Task 8.2 has its limitations as well. The careful development process, including a comprehensive background work with systematic literature studies and stakeholder interviews, was necessary in order for the Toolkit to be both evidence-based and practice-oriented. The translation of the questionnaires and other pilot materials as well as the actual Toolkit into various languages, in turn, was important to enable the pilot, and also the future dissemination and implementation. Nevertheless, these tasks took a considerable amount of the project's time and of Task 8.2 personnel resources. Recruiting workplaces, designing measurements, and conducting online surveys in six European countries and in six different languages were also time-consuming. Therefore, within CHRODIS PLUS, we were only able to conduct a small-scale pilot that focused on the evaluation of the usability and content of the Toolkit, and on the feasibility of the Toolkit in independent use, assessed based on pilot participants' intentions to implement Toolkit means and on their experiences of implementation. In internal discussions of Work Package 8, we presented also a proposal to conduct a randomized controlled pilot with impact evaluation on individual level. As this would have required additional funding as well as ethical clearance in each participating country, it was mutually agreed to refrain from it. Hence, a wider-scale implementation of the Toolkit, including the assessment of impact on employees' wellbeing, health, and work participation, as well as potential health economic evaluation, remains to be done in the future. However, it is worth noting that the means included in the Toolkit are predominantly evidence- and theory-based, and their effectiveness has already been documented in scientific literature. Therefore, besides measuring the impact of individual Toolkit means, it would be important to evaluate the effectiveness of the Toolkit as an instrument to inspire and encourage employers to start creating working conditions that foster employees' wellness and enable the continuation of working careers. This type of evaluation could be conducted both with and without additional instruction on the use of the Toolkit and support for the selection and implementation of its means.

The piloting of the Toolkit was somewhat challenged by the covid-19 pandemic. The conduct of the follow-up survey was ongoing by the time of the covid-19 outbreak. Six out of ten pilot workplaces completed the follow-up questionnaire before the outbreak and one during the first wave of the pandemic. The remaining three workplaces were lost during the lockdown, which is unfortunate but understandable. Fortunately, the baseline questionnaire was completed by all ten pilot workplaces, and the coverage of data collection can thus be seen as satisfactory. Furthermore, the data collected with the first questionnaire was the most important for the revision of the Toolkit. Hence, the pandemic did not harm the actual Toolkit development process.

Although only 40% of the original pilot workplaces (n=4) reported having implemented Toolkit means during the pilot, the proportion can be seen as a rather good achievement considering the short duration of the pilot and the covid-19 crisis that has had tremendous effects on the employment sector. Among pilot participants were workplaces that were completely shut down during the pandemic, and workplaces that needed to run

down a remarkable proportion of their operations and lay off personnel. One pilot workplace reported that covid-19 prevented them from implementing any Toolkit means. Another workplace that succeeded in implementing some means reported that covid-19 had nevertheless challenged the implementation.

Regarding the results of the pilot, it is worth noting that they are based on pilot participants' self-reports, and part of the reports needed to be translated into English before the analysis. Subjective data is always susceptible to bias, and translation involves a risk that some shades of the message alter or get lost on the way. Thus, the results of the Toolkit pilot ought to be interpreted with caution.

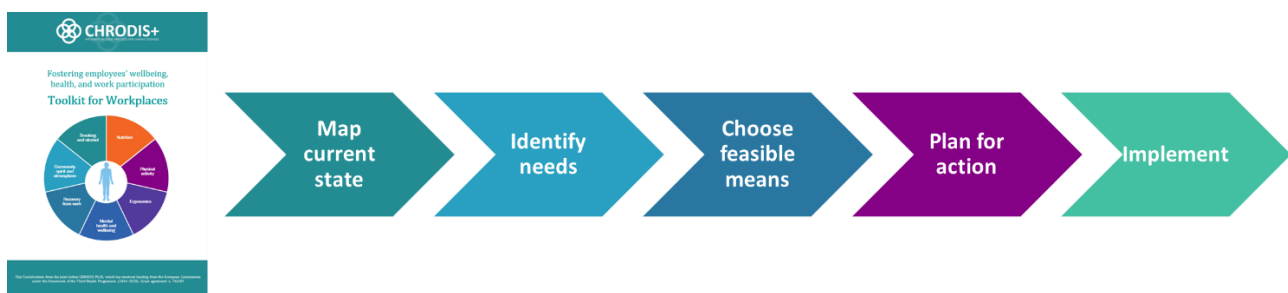
To improve the usability and dissemination of the Toolkit, we decided to aim for the development of a visually attractive online application of the Toolkit. As this was not anticipated in the planning phase, we were not able to involve a service provider during the development process. It would have been useful, though, if the development of both the pdf and the web-based version of the Toolkit could have happened side by side. People are increasingly moving online, and particularly at workplaces very few people have time and motivation to search information and read long documents. Thus, new tools to be developed for the use of workplaces should be designed so that they can easily be used with any mobile device, and that their content can be personalized for the needs of the user.

In the CHRODIS PLUS -initiative, there is a dedicated Work Package (WP4) to support the sustainability of the products of the project. A fruitful collaboration with WP4 was established during the process for instance by organizing the EU policy dialogue on employment and chronic conditions in EU parliament on November 12<sup>th</sup> 2019 (<http://chrodis.eu/event/eu-policy-dialogue-on-employment-and-chronic-conditions/>), where the Toolkit for Workplaces was presented and discussed as part of the CHRODIS PLUS Workbox on Employment and Chronic Conditions. Furthermore, the CHRODIS PLUS website will stay available also after the project has ended, and the products of WP8 will be accessible on a page designed in collaboration with WP2. The products of WP8 will also be submitted to the DG SANTE's Best Practice Portal <https://webgate.ec.europa.eu/dyna/bp-portal/index.cfm> where all interesting stakeholders will be able to download them. Nevertheless, to improve the uptake of the Toolkit particularly by its end users (i.e., the managers of workplaces and representatives of occupational health care services), it would be beneficial to additionally have an influential and respected partner that operates in the field of occupational health and that would commit to take the responsibility and ownership of the Toolkit after the end of CHRODIS PLUS. Such a partner could host and promote the Toolkit on its official website, and keep it updated over time. Ideally, such a partner would have been chosen already at the beginning of the project to enable its involvement in the development of the Toolkit throughout the way. In future development projects, more effort should be made already from the start of the project to consider how the product to be developed stays living and up-to-date after the end of the project, and to engage partners that can enable this to happen.

## Section 5 – Conclusion

Fostering occupational wellbeing and health has the potential to benefit employees through improved wellness and job satisfaction, and employers through reduced absenteeism, occupational healthcare costs, and staff turnover, as well as improved productivity and competitive advantage. The society benefits via increased sustainability and equity, improved population health, and reduced healthcare consumption.

The CHRODIS PLUS Toolkit for Workplaces was developed in the EU-funded Joint Action CHRODIS PLUS initiative within Work Package 8 that focused on employment and chronic conditions. The Toolkit collects concrete, practical means with which workplaces can promote the wellbeing, health, and work participation, as well as prevent the development and aggravation of chronic health problems equitably among all employees. The Toolkit can be used as a checklist and as an idea generator, and it provides tools to address the aforementioned targets from the identification of needs to action, as depicted in **Figure 15**. The Toolkit and the other product of CHRODIS PLUS Work Package 8, the Training Tool for Managers on inclusiveness and work ability, jointly form *The CHRODIS PLUS Workbox on Employment and Chronic Conditions* – a set of tools that will be freely available in various languages and in both printable pdf and web-based format.



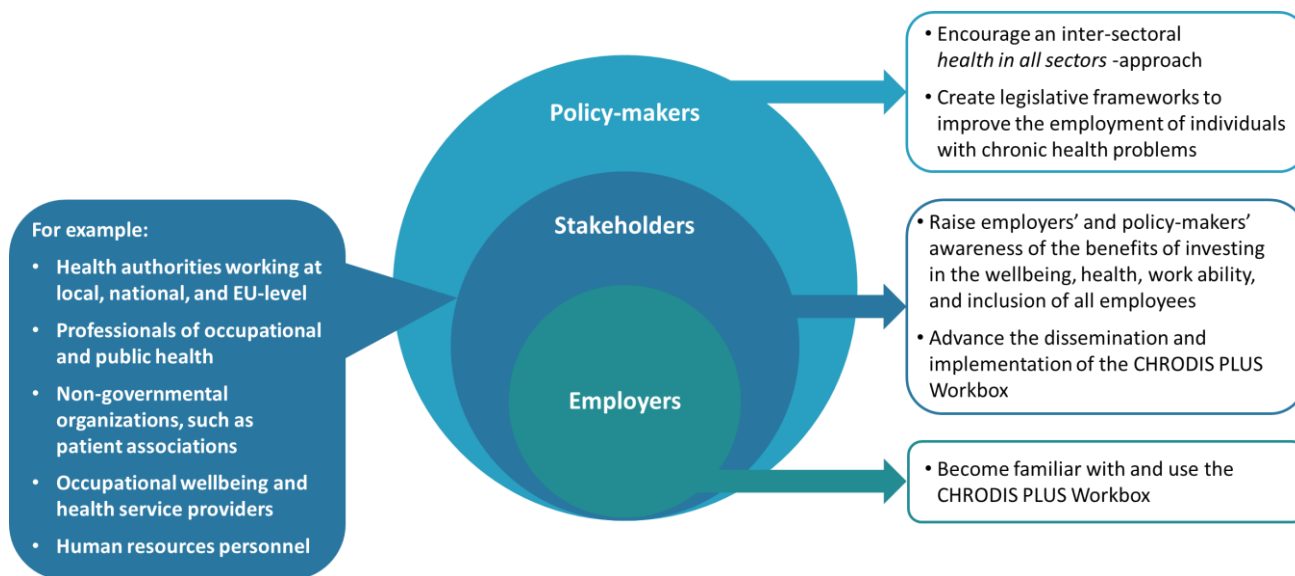
**Figure 15.** The ideal process of using the Toolkit

The Toolkit was constructed based on scientific evidence, stakeholder interviews, behaviour change models and theories, as well as practical considerations relevant for the workplace setting. The Toolkit was piloted in ten volunteer workplaces from various fields and six European countries after translation into relevant languages. The pilot was designed to represent a real-life situation where the management of workplaces receive the Toolkit, explore it on their own, and independently proceed to implement Toolkit means they find relevant for their workplace. Baseline and follow-up surveys were conducted for data collection. Overall, pilot workplaces evaluated the Toolkit useful, well-constructed, easy-to-read, and sufficiently detailed. All ten pilot workplaces considered implementing means suggested in the Toolkit, and four workplaces succeeded in implementing them during the pilot – despite its short duration and the outbreak of the covid-19 pandemic. These workplaces also intended to continue maintaining the implemented means after the end of the pilot. Seven workplaces expressed intentions to implement new Toolkit means in future. The Toolkit was refined based on open feedback received from pilot workplaces and stakeholders.

Pilot results indicated that the Toolkit is adaptable to diverse workplaces and suitable for workplaces to use independently. Nevertheless, support from workplace stakeholders, such as occupational wellbeing and health professionals, could enhance the adoption, implementation, and impact of the Toolkit at workplaces.

## Section 6 – Recommendations

The recommendations of CHRODIS PLUS Task 8.2 are summarized in **Figure 16**, and described in more detail in the list below.



**Figure 16.** Recommendations for next steps.

**1. Raise awareness of how investing in the wellbeing, health, work ability, and inclusion of all employees benefits not only employees, but also employers and the whole society.**

These investments enhance employees' wellness and job satisfaction. Employers benefit through reduced absenteeism, occupational healthcare costs, and staff turnover, and through improved productivity, competitive advantage, and an image as a caring employer. The society, in turn, benefits via increased sustainability and equity, improved population health, and reduced healthcare consumption.

**2. Promote the wellbeing, health, work participation, and inclusion of all employees.**

Advance the dissemination, uptake, and implementation of the CHRODIS PLUS Workbook on Employment and Chronic conditions and its two tools, the Training tool and the Toolkit, among employers, policy-makers, and stakeholders that have a possibility to influence occupational wellbeing and health. The Training Tool provides information on and tools for measuring and strengthening the inclusion and work ability of employees with or at risk of chronic conditions. The Toolkit includes concrete means that support workplaces to promote the wellbeing and health, prevent the development and progression of chronic health problems, and enhance the continuation of work among all employees, regardless of their work ability and health status.

**3. Create legislative frameworks to improve the employment of individuals with chronic diseases.**

Encourage Member States to adopt a holistic inter-sectoral *health in all sectors* -approach to tackle chronic diseases effectively. Targeting policy-makers is important in promoting the development of legislative frameworks that improve the accessibility of existing employment support for individuals with chronic diseases.



## References

Boisard P, Cartron D, Gollac M, Valeyre A. Time and work: duration of work. Dublin: European Foundation for the Improvement of Living and Working Conditions; 2002, p.25.

De Bacquer D, Van Risseghem M, Clays E, Kittel F, De Backer G, Braeckman L. Rotating shift work and the metabolic syndrome: a prospective study. *Int J Epidemiol* 2009;38:848-54.

<https://doi.org/10.1093/ije/dyn360>

Esquirol Y, Bongard V, Mabile L, Jonnier B, Soulat J, Perret B. Shift Work and Metabolic Syndrome: Respective Impacts of Job Strain, Physical Activity, and Dietary Rhythms. *Chronobiol Int* 2009;26:544-559.

<https://doi.org/10.1080/07420520902821176>

Eurostat. Self-perceived health statistics. Eurostat, Statistics Explained 2019. [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Self-perceived\\_health\\_statistics#Chronic\\_morbidity](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Self-perceived_health_statistics#Chronic_morbidity). Accessed 21 June 2020.

Gan Y, Yang C, Tong X, Sun H, Cong Y, Yin X, Li L, Cao S, Dong X, Gong Y, Shi O, Deng J, Bi H, Lu Z. Shift work and diabetes mellitus: a meta-analysis of observational studies. *Occup Environ Med* 2015;72:72-78.

<http://dx.doi.org/10.1136/oemed-2014-102150>

Grimani A, Aboagye E, Kwak L. The effectiveness of workplace nutrition and physical activity interventions in improving productivity, work performance and work ability: a systematic review. *BMC Public Health* 2019;19:1676

<https://doi.org/10.1186/s12889-019-8033-1>

Hansen AB, Stayner L, Hansen J, Andersen ZJ. Night shift work and incidence of diabetes in the Danish Nurse Cohort. *Occup Environ Med* 2016;73:262-268.

<http://dx.doi.org/10.1136/oemed-2015-103342>

Hemiö K, Puttonen S, Viitasalo K, Härmä M, Peltonen M, Lindström J. Food and nutrient intake among workers with different shift systems. *Occup Environ Med*. 2015;9:96-104.

<http://dx.doi.org/10.1136/oemed-2014-102624>

Hemiö K, Lindström J, Peltonen M, Härmä M, Viitasalo K, Puttonen S. Association of work stress and night work with nutrient intake. A prospective cohort study. *SJWEH* 2020 online first.

[doi:10.5271/sjweh.3899](https://doi.org/10.5271/sjweh.3899)

Hofmann W, Friese M, Wiers RW. Impulsive versus reflective influences on health behavior: a theoretical framework and empirical review. *Health Psychol Rev* 2008;2:111–37.

[doi:10.1080/17437190802617668](https://doi.org/10.1080/17437190802617668).

Kahneman D. *Thinking, fast and slow*. New York: Farrar, Straus and Giroux; 2011.

Krekel C, Ward G, De Neve J. Employee Wellbeing, Productivity, and Firm Performance. CEP Discussion Paper No 1605, March 2019. London: Centre for Economic Performance, London School of Economics and Political Science. <http://cep.lse.ac.uk/pubs/download/dp1605.pdf>. Accessed 21 June 2020.

Lamore K, Dubois T, Rothe U, Leonardi M, Girard I, Manuwald U, Nazarov S, Silvaggi F, Guastafierro E, Scaratti C, Breton T, Foucaud J. Return to Work Interventions for Cancer Survivors: A Systematic Review and a Methodological Critique. *Int. J. Environ. Res. Public Health* 2019;16:1343.

[doi:10.3390/ijerph16081343](https://doi.org/10.3390/ijerph16081343)

Marteau TM, Hollands GJ, Fletcher PC. Changing human behavior to prevent disease: The importance of targeting automatic processes. *Science* 2012;337:1492–1495. [doi:10.1126/science.1226918](https://doi.org/10.1126/science.1226918)

Michie S, van Stralen MM, West R. The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science* 2011;6(42). <https://doi.org/10.1186/1748-5908-6-42>

Morikawa Y, Nakagawa H, Miura K, Soyama Y, Ishizaki M, Kido T, Naruse Y, Suwazono Y, Nogawa K. Effect of shift work on body mass index and metabolic parameters. *Scand J Work Environ Health* 2007;33:45–50. [www.jstor.org/stable/40967620](http://www.jstor.org/stable/40967620) Accessed 21 June 2020.

Nazarov S, Manuwald U, Leonardi M, Silvaggi F, Foucaud J, Lamore K, Guastafierro E, Scaratti C, Lindström J, Rothe U. Chronic Diseases and Employment: Which Interventions Support the Maintenance of Work and Return to Work among Workers with Chronic Illnesses? A Systematic Review. *Int. J. Environ. Res. Public Health* 2019;16:1864; [doi:10.3390/ijerph16101864](https://doi.org/10.3390/ijerph16101864)

OECD/EU. Health at a Glance: Europe 2016 – State of Health in the EU Cycle. Paris: OECD Publishing; 2016, Chapter 1. <http://dx.doi.org/10.1787/9789264265592-en>

Papies EK. Health goal priming as a situated intervention tool: How to benefit from nonconscious motivational routes to health behaviour. *Health Psychol Rev* 2016;10:408–24. [doi:10.1080/17437199.2016.1183506](https://doi.org/10.1080/17437199.2016.1183506).

Pietroiusti A, Neri A, Somma G, Coppeta L, Iavicoli I, Bergamaschi A, Magrini A. Incidence of metabolic syndrome among night-shift healthcare workers. *Occup Environ Med* 2010;67:54-57. <http://dx.doi.org/10.1136/oem.2009.046797>

Proper K, van Oostrom S. The effectiveness of workplace health promotion interventions on physical and mental health outcomes – a systematic review of reviews. *Scand J Work Environ Health* 2019;45(6):546-559. [doi:10.5271/sjweh.3833](https://doi.org/10.5271/sjweh.3833)

Shea BJ, Reeves BC, Wells G, Thuku M, Hamel C, Moran J, Moher D, Tugwell P, Welch V, Kristjansson E, Henry DA. AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. *BMJ* 2017;358:j4008. [doi: 10.1136/bmj.j4008](https://doi.org/10.1136/bmj.j4008)

Strack F, Deutsch R. Reflective and impulsive determinants of social behavior. *Personal Soc Psychol Rev* 2004;8:220–47. [https://doi.org/10.1207/s15327957pspr0803\\_1](https://doi.org/10.1207/s15327957pspr0803_1)

Thaler RH, Sunstein CR. *Nudge: Improving decisions about health, wealth, and happiness*. Updated ed. London: Penguin Books; 2009.

Torquati L, Mielke GI, Brown WJ, Kolbe-Alexander T. Shift work and the risk of cardiovascular disease. A systematic review and meta-analysis including dose-response relationship. *Scand J Work Environ Health* 2018;44:229-238. <https://doi.org/10.5271/sjweh.3700>

van Amelsvoort LG, Schouten EG, Kok FJ. Duration of shiftwork related to body mass index and waist to hip ratio. *Int J Obes Relat Metab Disord* 1999;23:973–8. <https://doi.org/10.1038/sj.ijo.0801028>

Vetter C, Dashti HS, Lane JM, Anderson SG, Schernhammer ES, Rutter MK, Saxena R, Scheer, Frank A. J. L. Night Shift Work, Genetic Risk, and Type 2 Diabetes in the UK Biobank. *Diabetes Care* 2018;41:762-769. <https://doi.org/10.2337/dc17-1933>

Vetter C, Devore EE, Wegrzyn LR, Massa J, Speizer FE, Kawachi I, Rosner B, Stampfer MJ, Schernhammer ES. Association Between Rotating Night Shift Work and Risk of Coronary Heart Disease Among Women. *JAMA* 2016;315:1726-1734. [doi:10.1001/jama.2016.4454](https://doi.org/10.1001/jama.2016.4454)

Vyas MV, Garg AX, Iansavichus AV, Costella J, Donner A, Laugsand LE, Janszky I, Mrkobrada M, Parraga G, Hackam DG. Shift work and vascular events: systematic review and meta-analysis. *BMJ* 2012;345. <https://doi.org/10.1136/bmj.e4800>

WHO. Noncommunicable diseases. World Health organization 2018. <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>. Accessed 21 June 2020.

WHO & World Economic Forum. Preventing noncommunicable diseases in the workplace through diet and physical activity: WHO/World Economic Forum report of a joint event. Geneva: World Health Organization / World Economic Forum; 2008. <https://apps.who.int/iris/handle/10665/43825>. Accessed 21 June 2020.

Wierenga D, Engbers LH, Van Empelen P, Duijts S, Hildebrandt VH, Van Mechelen W. What is actually measured in process evaluations for worksite health promotion programs: a systematic review. *BMC Public Health* 2013;13:1190. <https://doi.org/10.1186/1471-2458-13-1190>

Zhao I, Bogossian F, Turner C. Does maintaining or changing shift types affect BMI? A longitudinal study. *J Occup Environ Med* 2012;54:525–31. [doi: 10.1097/JOM.0b013e31824e1073](https://doi.org/10.1097/JOM.0b013e31824e1073)

## Annex 1 – Outline for interviews with employers and stakeholders

### Instructions for the interviewer:

- Along the questioning route, notes/instructions/additional examples typed with *blue coloured italic font* are meant for the interviewer to help him/her conduct the interview and aid the interviewee to answer the questions.
- In this interview, occupational health promotion and disease prevention refer to actions over and beyond (mandatory) occupational safety issues.
- Not all questions may be relevant for all interviewees. Questions not relevant for the person interviewed can be passed.
- Regarding chronic diseases (CD), the focus is on the following CDs: diabetes type 2, cardiovascular diseases, cancer, lung diseases, musculoskeletal disorders, and depression.

### I) Background questions

1. Field of operation / work sector of the organization the interviewee represents
2. Number of employees at the workplace
3. What type of work do the employees do?
  - If the quality of work varies depending on employee's position, describe the quality of work in different types of posts within the organization. (*e.g. shift work, physical demands such as carrying heavy loads or sedentary work tied in one place; psychological demands such as accountability, demanding customer service or responsibility for other people's health and safety*)
4. Interviewee's
  - a) gender
  - b) position in the organization
5. How do You see employer's overall role/responsibility in
  - a) promoting employees' health or preventing the development of CDs and (over and beyond occupational safety issues)
  - b) promoting work participation of employees' with diagnosed CDs (over and beyond occupational safety issues)?

## **II) Interventions promoting health and/or preventing the development of CDs**

*All kinds of interventions can be implemented at workplace. In general, we distinguish the following levels of workplace interventions: 1) environmental/physical level (e.g. height-adjustable desks, saddle chairs, staff restaurant providing healthy food options), 2) individual level (e.g. lifestyle counselling (diet, physical activity, sleep smoking cessation etc.), monetary subvention for engaging in sports activities), 3) social level (e.g. work community's common well-being events, group-based stress reduction programmes, coffee breaks), and 4) the organizational level (e.g. adaptations of work schedules or working hours).*

6. Are there interventions or workplace adaptations available for employees to promote their health (or prevent the development of CDs)? If yes, please describe each of these (*You can refer to the above-mentioned 4 levels of interventions to help the interviewees to remember and describe available interventions*).
7. Are the interventions offered to all employees or only to a specific group of workers (e.g. based on the type of employment contract), and if so, to whom?
8. To what extent do employees participate in the available interventions /make use of workplace adaptations?
  - Which percentage of employees participate in the available interventions? (*If unknown, ask for an estimate*)
9. Support for utilising the available interventions
  - a) In which ways are employees informed about or supported to make use of / participate in the available interventions?
  - b) What is needed to increase employees' making use of / participation in the available interventions?
10. Regarding the implementation of these interventions, in your opinion, which are the most important
  - a) barriers? (*Ask for factors that impede the implementation. If there are unsuccessful attempts to implement these interventions, ask for reasons for failure.*)
  - b) facilitators? (*Ask for factors that facilitate the implementation. If there are successful experiences of implementing these interventions, ask for factors that have facilitated the success.*)

### **III) Interventions targeted for employees with CDs to enhance their ability to work as well as participation and maintenance in working life**

*Several types of interventions can be implemented at the workplace to enhance work participation, such as strategies supporting an employees' return to work after a period of sick leave, physical changes in the work environment such as a height-adjustable desks, adaptations of tasks, work schedules or working hours, psychological support or other strategies promoting the maintenance of employees in working life at least part-time despite their CD.*

11. Are there interventions to enhance work participation for employees with CDs? If yes, please describe each of these?
12. To what extent do employees with CDs make use of the available interventions to enhance work participation?
  - Do specific groups of employees participate in those interventions?
13. Support for utilising the available interventions
  - a) In which ways are employees informed about or supported to make use of / participate in the available interventions?
  - b) What is needed to increase employees' making use of / participation in the available interventions?
14. Regarding the implementation of these interventions to enhance work participation of employees with CDs, in your opinion, which are the most important
  - a) barriers? *(Ask for factors that impede the implementation. If there are unsuccessful attempts to implement these interventions, ask for reasons for failure.)*
  - b) facilitators? *(Ask for factors that facilitate the implementation. If there are successful experiences of implementing these interventions, ask for factors that have facilitated the success.)*

### **IV) Interest in participating in piloting the toolkit**

15. Would Your organisation be interested in piloting the workplace toolkit that will be developed in CHRODIS PLUS project?

## Annex 2 – Outline for interviews with employees

### Instructions for the interviewer:

- Along the questioning route, notes/instructions/additional examples typed with *blue coloured italic font* are meant for the interviewer to help him/her conduct the interview and aid the interviewee to answer the questions.
- In this interview, occupational health promotion and disease prevention refer to actions over and beyond (mandatory) occupational safety issues.
- Not all questions may be relevant for all interviewees. Questions not relevant for the person interviewed can be passed.
- Regarding chronic diseases (CD), the focus is on the following CDs: diabetes type 2, cardiovascular diseases, cancer, lung diseases, musculoskeletal disorders, and depression.

### I) Background questions

1. Field of operation / work sector of the organization the interviewee represents
2. Interviewee's
  - a) gender
  - b) position in the organization
3. Type of work (*e.g. shift work; physical demands such as carrying heavy loads or sedentary work tied in one place; psychological demands such as accountability, demanding customer service or responsibility for other people's health and safety*)

### II) Interventions promoting health and/or preventing the development of CDs

4. Which interventions or workplace adaptations are available for You to promote Your wellbeing and health? Can you describe each of these?

*If needed, provide the interviewee some examples of interventions: 1) environmental/physical level (e.g. height-adjustable desks, saddle chairs, staff restaurant providing healthy food options), 2) individual level (e.g. lifestyle counselling (diet, physical activity, sleep smoking cessation etc.), monetary subvention for engaging in sports activities), 3) social level (e.g. group-based stress reduction programmes, work community's common well-being events, coffee breaks), and 4) the organizational level (e.g. adaptations of work schedules or working hours).*

5. Do You and/or Your co-workers make use of / participate in the available interventions / workplace adaptations?

6. What, in Your opinion, are reasons that
  - a) encourage employees to make use of the available interventions?
  - b) discourage employees to make use of the available interventions?
  
7. Support for utilising the available interventions
  - a) In which ways are employees informed about or supported to make use of / participate in available interventions at Your workplace?
  - b) Which informational / support strategies encourage You to make use of / participate in the available interventions? Why?
  - c) What could be done to increase Your making use of / participation in the available interventions?

**III) Interventions targeted for employees with CDs to enhance their ability to work as well as participation and maintenance in working life**

8. Which interventions or workplace adaptations are there available for employees to enhance their work participation when they experience chronic health problems? Can You describe each of these?  
  
*If needed, provide the interviewee some examples: a return-to-work intervention, physical changes in the work environment such as height-adjustable desks, adaptations of tasks, work schedules or working hours, psychological support.*
  
9. Do You and/or Your co-workers participate in the available interventions /make use of workplace adaptations?
  
10. What, in Your opinion, are reasons that
  - a) encourage employees to make use of the available interventions?
  - b) discourage employees to make use of the available interventions?
  
11. Support for utilising the available interventions
  - a) In which ways are employees informed about or supported to make use of / participate in the available interventions at Your workplace?
  - b) Which informational / support strategies encourage You to make use of / participate in the available interventions? Why?
  - c) What could be done to increase Your making use of / participation in the available interventions?



#### IV) Acceptance

12. Do You find it (morally, ethically) acceptable that an employer attempts to influence Your lifestyle (*e.g., diet and physical activity related habits*)?
  - a) Yes; please explain
  - b) No; please explain
  - c) If no: can You think of any examples of strategies that are, from Your perspective, acceptable for an employer to use to influence employees' lifestyle?
  
13. What kind of interventions or workplace adaptations would, in Your opinion, best support employees' healthy lifestyles and/or work participation?

## Annex 3 – Invitation to participate in the pilot

[E-mail heading]

Test a Toolkit for supporting employees' wellbeing

[E-mail content]

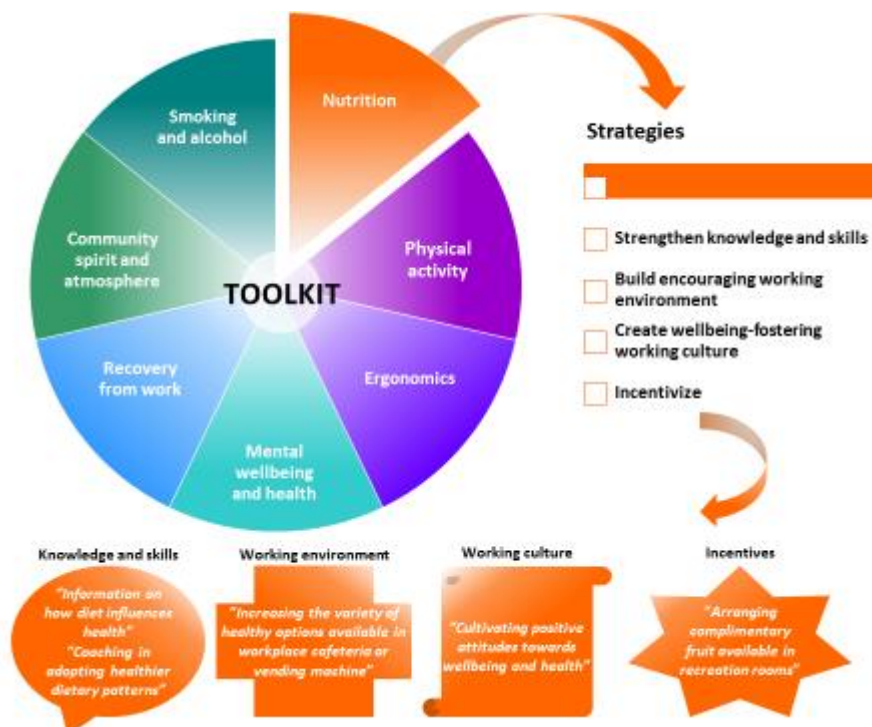
Dear *[recipient's name]*

### Support employees' wellbeing, health, and work participation

Within [CHRODIS PLUS](#), a three-year (2017–2020) initiative funded by the European Commission, we are developing a Toolkit that collects evidence-based and practically proven strategies through which workplaces can

1. promote the wellbeing and health
2. prevent the development of chronic health problems, and
3. enhance work participation among all employees

The Toolkit is designed for the use of all parties involved in fostering occupational wellbeing and health, in particular the HR and the management of workplaces. The kit includes strategies within seven domains, each contributing to the overall wellbeing and health.



## Be among the first to test the Toolkit

We are currently searching for voluntary European workplaces willing to test and evaluate the Toolkit, and hence help us improving it.

### Why?

Fostering occupational wellbeing benefits both employees and employers. Employees' improved wellbeing and health pay back in:

- ✓ Greater employee satisfaction
- ✓ Higher productivity
- ✓ Improved company image
- ✓ Reduced staff turnover

### What does it require and when?

#### September 2019: *Explore and plan*

We provide you the Toolkit so you can familiarise yourself with its content, and ask you to consider which of its strategies could be feasible and most beneficial in your organisation. Then, we encourage you to make an action plan for putting one or more of these strategies into practice.

#### September – October 2019: *Provide feedback*

We ask you to answer a web-based questionnaire to evaluate the Toolkit and tell us about your plans for implementing its strategies.

#### October 2019 – February 2020: *Test*

You have time to independently put into action and collect experiences on the implementation of your chosen strategies.

#### February 2020: *Share your experiences*

We ask you to answer another web-based questionnaire to provide your experiences on the implementation of your chosen strategies.

With kind regards on behalf of the CHRODIS+ initiative,

*[Signature and contact information of the sender]*

## Annex 4 – Information provided for pilot participants



### Piloting the Toolkit for Workplaces *Information for participants*

CHRODIS+ WP8 Task 8.2  
5.9.2019

 @EUCHRODISplus

 #CHRODISplus

[chrodis.eu](http://chrodis.eu)

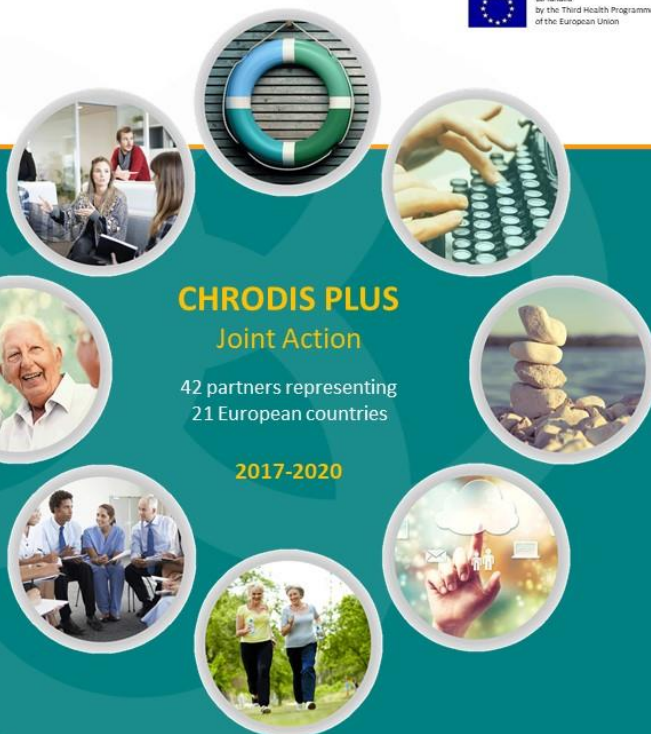


MEMBER STATES  
STEP UP  
TOGETHER AND  
SHARE  
BEST PRACTICES  
TO ALLEVIATE  
THE BURDEN OF  
CHRONIC DISEASES

#### CHRODIS PLUS Joint Action

42 partners representing  
21 European countries

2017-2020





# Toolkit for workplaces

5.9.2019



3

## Aim

To foster employees' wellbeing, health and work participation

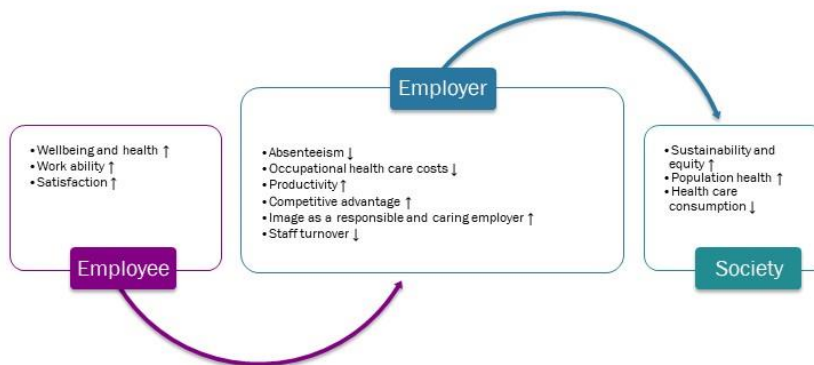


5.9.2019



## Why?

Fostering employees' wellbeing, health, and work participation benefits both employees and employers, as well as the society, in several ways



5.9.2019



## What and for whom?

### WHAT IS THE TOOLKIT MADE OF?

Evidence-based and practically proven means through which workplaces can

- support the wellbeing and health, and enhance the work participation of all employees regardless of their current work ability and health status.
- prevent chronic health problems, such as cardiovascular diseases, type 2 diabetes, musculoskeletal disorders, depression, and lung diseases.

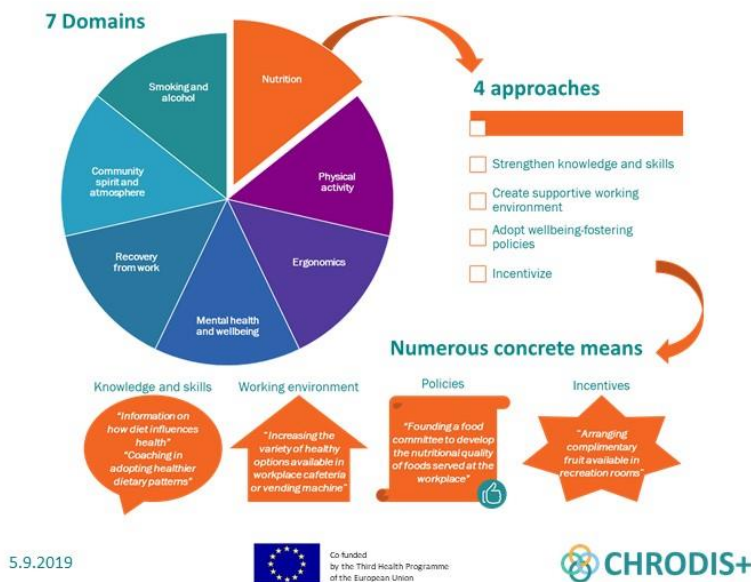
### WHOM IS THE TOOLKIT DESIGNED FOR?

- For the use of all parties involved in fostering occupational wellbeing
  - Management of workplaces
  - Human resources personnel
  - Catering service providers
  - Occupational healthcare

5.9.2019



# Structure



# How to get the most out of the Toolkit?

The Toolkit can be used both as a checklist and as an idea creator. We suggest the following steps for gaining the greatest benefit:

1. Map which Toolkit domains already have been paid attention to, and which approaches and means currently are in use in your organization.
  - **Tip:** Appendix 1 provides a checklist form that helps in doing this.
2. Consider which domains you could still work on to best support the employees of your workplace. What would your employees need the most to stay well and to be able to work also in the future?
3. Having identified the most important development domains, take a closer look at the concrete means they contain. Which of the means would be the most beneficial and feasible in your organization?
4. Choose 1–3 means at a time, and plan how and when you will put them into action.
  - **Note:** The means of the Toolkit are examples. When implemented, they can be adjusted to find the best fit for own workplace.
  - **Tip:** Appendix 2 provides further information on how to ensure successful implementation.

For more detailed information on the background, development, and content of the Toolkit, and instructions for use, please refer to the Toolkit [INTRODUCTION](#).

## Planned tasks and estimated schedule

### September 2019: *Explore and plan*

We provide you the Toolkit so you can familiarise yourself with its content, and ask you to consider which of its means could be feasible and most beneficial in your organisation. Then, we encourage you to make an action plan for putting one or more of these means into practice.

### September – October 2019: *Provide feedback*

We ask you to answer an anonymous web-based questionnaire to evaluate the Toolkit and tell us about your plans for implementing its means.

- It is enough that one person from the workplace completes the questionnaire. However, if several persons have familiarised themselves with the content of the Toolkit, each can complete the questionnaire independently.

### October 2019 – February 2020: *Test*

You have time to independently put into action and collect experiences on the implementation of your chosen means.

### February 2020: *Share your experiences*

We ask you to answer another web-based questionnaire to provide your experiences on the implementation of your chosen means.

5.9.2019



## Participation: requirements and costs

- **No participation fees**  
Participating in the pilot is free of charge.
- **Right to withdraw at any time**  
Participating workplaces have the right to withdraw from the pilot at any time without any costs.
- **Workplace receives the Toolkit**  
After the pilot, participating workplaces can keep the Toolkit.
- **Workplace covers time and effort related costs**  
Participating workplaces are responsible for covering costs related to the person-hours required for participating in the pilot, e.g.:
  - The time it takes for someone at the workplace to read the Toolkit document and complete the two questionnaires
  - The time spent on internal meetings to decide whether or not to implement any Toolkit means.
- **Implementation is voluntary**  
Implementing one or more of the means included in the Toolkit is *recommended, yet voluntary*. Participation is possible even if no Toolkit means will be put into practice.
- **Workplace covers implementation costs**  
If a participating workplace chooses to put into practice one or more of the means included in the Toolkit, the workplace is responsible for covering possible implementation costs, e.g., those related to material purchases or person-hours.

5.9.2019







## Contact information of your local contact person

Name, email address



11



## Thank you for your attention

### The Joint Action on Implementing good practices for chronic diseases (CHRODIS PLUS)

This presentation arises from the Joint Action CHRODIS PLUS. This Joint Action is addressing chronic diseases through cross-national initiatives identified in JA-CHRODIS to reduce the burden of chronic diseases while assuring health system sustainability and responsiveness, under the framework of the Third Health Programme (2014-2020). Sole responsibility lies with the author and the Consumers, Health, Agriculture and Food Executive Agency is not responsible for any use that may be made of in the information contained therein.



## Annex 5 – Cover letter of the pilot baseline questionnaire

[Subject]

CHRODIS+ Toolkit: Link to the first questionnaire

[Email]

Dear *[recipient's name]*,

I am writing to you concerning the CHRODIS+ Toolkit for workplaces, which I emailed you a little while ago. I hope you have had the time to familiarize yourself with the document.

The Toolkit is a pilot version, which means that its usability and usefulness will be developed based on test users' feedback. We hope you could provide your feedback on the Toolkit by answering a questionnaire behind this link: *[link]*. We wish to receive your feedback by *[date]*.

Below you can find more information on the questionnaire as well as tips for completing it. Furthermore, please find enclosed the questionnaire outline if you wish to formulate your answers in advance.

If you have any questions concerning the questionnaire, please don't hesitate to contact me.

Thank you for your time and effort,

*[sender's name and contact information]*

### Good to know about the questionnaire

#### Practical information and tips

- ✓ Please fill in the questionnaire after you have had time to familiarize yourself with the Toolkit document, and after you have considered which of its means could be possible to put into practice at your workplace.
- ✓ Having the Toolkit document at hand while completing the questionnaire is recommended, as it can help to complete the questionnaire.
- ✓ Completing the questionnaire takes approximately 10–30 minutes.
- ✓ Note that in the questionnaire it is not possible to go back and revisit earlier pages and that the questionnaire cannot be saved unfinished. Consequently, it must be completed at one go.
- ✓ If more than one person at your workplace has familiarized him-/herself with the Toolkit, each can answer the questionnaire independently, or you can formulate your answers together, and one person completes the questionnaire for all.
- ✓ At the end of the questionnaire you have the possibility to provide suggestions for improvement and leave comments concerning the Toolkit or the questionnaire.

#### Privacy protection

- ✓ The questionnaire is completed anonymously.
- ✓ Collected data will be treated confidentially according to the Personal Data Act (FINLEX® 523/1999) and the EU General Data Protection Regulation (GDPR).
- ✓ Collected data will be stored in a protected file, which only the members of the research group have access to, and will not be handed over to anyone outside the research group.
- ✓ Collected data will be analysed and the results will be reported on a group level, which means that the identification of individual respondents or organizations the respondents represent is not possible.

## Annex 6 – Baseline questionnaire of the pilot

### Informed consent

This survey arises from the Joint Action CHRODIS PLUS, a three-year (2017–2020) initiative aiming to support EU member states in facing the burden of non-communicable diseases by promoting the implementation of best practices. CHRODIS PLUS is funded by the European commission and participating partner organizations.

The objective of this survey is to collect feedback and user experiences on one of the products of CHRODIS PLUS, the Toolkit for workplaces, to enable its further development. The questionnaire is completed anonymously, and the data collected will be treated confidentially according to the Personal Data Act (FINLEX® 523/1999) and the EU General Data Protection Regulation (GDPR). The collected data will be stored in a protected file, which only the members of the CHRODIS PLUS research group have access to, and will not be handed over to anyone outside the research group. The collected data will be analysed and the results of the survey reported on a group level, which means that the identification of individual respondents or organizations the respondents represent is not possible.

I give my informed consent to use the data I provide by filling in this questionnaire in the development of the CHRODIS PLUS Toolkit for workplaces, and in reporting the results of this survey.

\*\*\*

### Questionnaire

Dear participant,

Welcome to fill in the first questionnaire of the CHRODIS PLUS pilot of the Toolkit for workplaces. The aim of this questionnaire is to collect feedback and user experiences on the Toolkit to enable its further development into a more user-friendly and useful tool.

Fill in this questionnaire after you have had time to read the Toolkit document that your local CHRODIS PLUS contact person has provided you, and after you have considered which of the means included in the Toolkit could be possible to put into practice at the workplace you represent. Having the Toolkit document at hand while completing this questionnaire is recommended. Completing the questionnaire takes approximately 10–30 minutes.

Thank you for helping us to improve the Toolkit!

\*\*\*

## Background questions

1. What is the field of operation/ sector of the workplace you represent?
2. What is your job title at the workplace?

\*\*\*

*Regarding the following questions, please consider both permanent and temporary employees currently working at the workplace you represent. If accurate figures are not available, please provide best possible estimates.*

3. What is the size of the workplace you represent?
  - a. Micro (< 10 employees)
  - b. Small (10–49 employees)
  - c. Medium (50–249 employees)
  - d. Large ( $\geq$  250 employees)
4. What is the age structure of employees?
  - a. Percentage (%) of employees under 30 years of age
  - b. Percentage (%) of employees 30–49 years of age
  - c. Percentage (%) of employees 50 years of age or older
5. What is the gender distribution of employees?
  - a. Percentage (%) of females
  - b. Percentage (%) of males
  - c. Percentage (%) of other
6. What percentage (%) of employees are
  - a. blue-collar workers?
  - b. white-collar workers?

\*\*\*

## Evaluation of the Toolkit

*This section contains statements related to the usability and utility of the Toolkit as a whole. On each statement, please select the alternative that best describes your opinion (1 = totally disagree, 7 = totally agree).*

	Totally disagree						Totally agree
7. The Toolkit is easy and pleasant to use.	1	2	3	4	5	6	7
8. The structure of the Toolkit is coherent and logical.	1	2	3	4	5	6	7
9. The text in the Toolkit is clear and easy to understand.	1	2	3	4	5	6	7
10. The information the Toolkit contains is useful for our workplace.	1	2	3	4	5	6	7

*This section contains statements related to the content of the Toolkit by focusing on each of the seven Toolkit domains separately. When answering, please consider the Toolkit domain in question, and select the alternative that best describes your opinion (1 = totally disagree, 7 = totally agree).*

	Totally disagree						Totally agree
11. Domain: Nutrition							
a. The domain provided me useful ideas on how to promote employees' healthy dietary patterns	1	2	3	4	5	6	7
b. The selection of concrete means is comprehensive	1	2	3	4	5	6	7
c. The means are feasible at our workplace	1	2	3	4	5	6	7
d. The means are described detailed enough to understand their idea and to know how to proceed to put them into practise	1	2	3	4	5	6	7
12. Domain: Physical activity							
a. The domain provided me useful ideas on how to promote employees' physical activity	1	2	3	4	5	6	7
b. The selection of concrete means is comprehensive	1	2	3	4	5	6	7
c. The means are feasible at our workplace	1	2	3	4	5	6	7
d. The means are described detailed enough to understand their idea and to know how to proceed to put them into practise	1	2	3	4	5	6	7

	Totally disagree						Totally agree
<b>13. Domain: Ergonomics</b>							
a. The domain provided me useful ideas on how to promote employees' ergonomics	1	2	3	4	5	6	7
b. The selection of concrete means is comprehensive	1	2	3	4	5	6	7
c. The means are feasible at our workplace	1	2	3	4	5	6	7
d. The means are described detailed enough to understand their idea and to know how to proceed to put them into practise	1	2	3	4	5	6	7
<b>14. Domain: Mental health and wellbeing</b>							
a. The domain provided me useful ideas on how to promote employees' mental health and wellbeing	1	2	3	4	5	6	7
b. The selection of concrete means is comprehensive	1	2	3	4	5	6	7
c. The means are feasible at our workplace	1	2	3	4	5	6	7
d. The means are described detailed enough to understand their idea and to know how to proceed to put them into practise	1	2	3	4	5	6	7
<b>15. Domain: Recovery from work</b>							
a. The domain provided me useful ideas on how to promote employees' recovery from work	1	2	3	4	5	6	7
b. The selection of concrete means is comprehensive	1	2	3	4	5	6	7
c. The means are feasible at our workplace	1	2	3	4	5	6	7
d. The means are described detailed enough to understand their idea and to know how to proceed to put them into practise	1	2	3	4	5	6	7
<b>16. Domain: Community spirit and atmosphere</b>							
a. The domain provided me useful ideas on how to promote employees' community spirit and atmosphere	1	2	3	4	5	6	7
b. The selection of concrete means is comprehensive	1	2	3	4	5	6	7
c. The means are feasible at our workplace	1	2	3	4	5	6	7
d. The means are described detailed enough to understand their idea	1	2	3	4	5	6	7

	Totally disagree					Totally agree	
and to know how to proceed to put them into practise							
17. Domain: Smoking and alcohol							
a. The domain provided me useful ideas on how to promote employees' smoking cessation and reduction of excess alcohol consumption	1	2	3	4	5	6	7
b. The selection of concrete means is comprehensive	1	2	3	4	5	6	7
c. The means are feasible at our workplace	1	2	3	4	5	6	7
d. The means are described detailed enough to understand their idea and to know how to proceed to put them into practise	1	2	3	4	5	6	7

\*\*\*

18. Has your workplace already carried out some actions to support employees' wellbeing and health within one or more of the seven Toolkit domains?

- a. Yes [→ shift to question no. 19]
- b. No [→ shift to question no. 22]

\*\*\*

19. Which domains have these actions targeted? Please select all the alternatives that apply to your workplace.

- a. nutrition
- b. physical activity
- c. ergonomics
- d. mental health and wellbeing
- e. recovery from work
- f. community spirit and atmosphere
- g. smoking cessation and reduction of excess alcohol consumption

20. Is there something your workplace could still do to further support employees' wellbeing and health within one or more of the seven Toolkit domains?

- a. Yes [→ shift to question no.21]
- b. No [→ shift to question no. 22]

\*\*\*

21. Within which domains could your workplace implement further actions? Please select all the alternatives that apply to your workplace.

- a. nutrition
- b. physical activity
- c. ergonomics
- d. mental health and wellbeing
- e. recovery from work
- f. community spirit and atmosphere
- g. smoking cessation and reduction of excess alcohol consumption

\*\*\*

### Plans for implementing Toolkit means

22. Has your workplace considered putting into practice any of the concrete means of the Toolkit?

- a. Yes [*→ shift to question no. 23*]
- b. No [*→ shift to question no. 30*]

\*\*\*

23. Which Toolkit means has your workplace considered putting into practice? Please provide the sub-heading number and name of each considered mean. For example: 2.1 Face-to-face support, 3.2 Attractive stairwell.

24. Of the considered means, has your workplace determined to put some into practice?

- a. Yes [*→ shift to question no. 25*]
- b. No [*→ shift to question no. 31*]

\*\*\*

25. Which Toolkit means has your workplace determined to put into practice? Please provide the sub-heading number and name of each selected mean. For example: 2.1 Face-to-face support, 3.2 Attractive stairwell.

26. What were the reasons that determined that your workplace decided to put these means into practice? Please select all the alternatives that apply to your workplace.

- a. The means were needed.
- b. The means were feasible.
- c. The management supported implementation.
- d. Needed resources were available (know-how, funding, time, personnel, materials, and/or facilities)
- e. Some other factor, what? \_\_\_\_\_



27. How is your workplace going to put the selected means into practice? Please provide a short, free-form description of the concrete actions that will be taken, when will the actions be taken, and who is responsible for them.
28. Did your workplace first consider putting into practice some other Toolkit means, but eventually determined not to?
- Yes [*→ shift to question number 29*]
  - No [*→ shift to question number 32*]

\*\*\*

29. Which were the reasons for this decision? Please select all the alternatives that apply to your workplace.
- The means were not needed.
  - The means were not feasible.
  - Lack of interest
  - Lack of management's support
  - Lack of funding
  - Lack of time
  - Lack of personnel
  - Lack of needed materials and/or facilities
  - Lack of information on how to implement the means
  - Some other factor, what? \_\_\_\_\_

[*→ shift to question number 32*]

\*\*\*

[*Question no. 30 only for respondents having selected alternative b. in question no. 22*]

30. Which were the reasons that determined that your workplace did not consider putting into practice any of the means in the Toolkit? Please select all the alternatives that apply to your workplace.
- The means were not needed.
  - The means were not feasible.
  - Lack of interest
  - Lack of management's support
  - Lack of funding
  - Lack of time
  - Lack of personnel
  - Lack of needed materials and/or facilities
  - Lack of information on how to implement the means
  - All feasible means have already been implemented.
  - Our workplace is involved in another project promoting employees' wellbeing, health, and/or work participation.
  - Some other factor, what? \_\_\_\_\_

[→ shift to question number 32]

\*\*\*

[Question no. 31 only for respondents having selected alternative b. in question no. 24]

31. Which were the reasons that determined that your workplace decided not to put into practise any of the considered means? Please select all the alternatives that apply to your workplace.

- a. The means were not needed.
- b. The means were not feasible.
- c. Lack of interest
- d. Lack of management's support
- e. Lack of funding
- f. Lack of time
- g. Lack of personnel
- h. Lack of needed materials and/or facilities
- i. Lack of information on how to implement the means
- j. Some other factor, what? \_\_\_\_\_

[→ shift to question number 32]

\*\*\*

### Suggestions for improvement

32. Do you feel there is something relevant missing in the Toolkit? If yes, what is it?

33. If you could change something in the Toolkit to make it better, what would it be?

34. Other feedback you would like to give

\*\*\*

Thank you for your valuable contribution!

## Annex 7 – Cover letter of the pilot follow-up questionnaire

[Subject]

CHRODIS+ Toolkit for Workplaces: The second and last questionnaire of the pilot

[Email]

Dear *[recipient's name]*,

The pilot of the CHRODIS PLUS Toolkit is coming to an end, and it is time to answer the second and last questionnaire. The questionnaire concerns the implementation of the means introduced in the Toolkit, and experiences gained from the implementation. We hope you to answer the questionnaire even if your workplace hasn't implemented any of the means introduced in the Toolkit.

We wish you to complete the questionnaire at latest *[date]* by following this link: *[link]*. Attached you can also find the outline of the questionnaire, in case you wish to formulate your answers in advance, and the Toolkit, which will be of help when completing the questionnaire.

Below you can find more information on the questionnaire and its privacy protection, as well as tips for completing the questionnaire.

I will be happy to answer any questions related to the questionnaire.

Thank you for your time and effort,

*[sender's name and contact information]*



### Attachments

- Outline of the 2. questionnaire
- CHRODIS+ Toolkit

### Good to know about the questionnaire

#### Practical information and tips

- ✓ Having the Toolkit document at hand while completing the questionnaire is recommended, as it can help to complete the questionnaire.
- ✓ Completing the questionnaire takes approximately 5-10 minutes.
- ✓ Note that in the questionnaire it is not possible to go back and revisit earlier pages and that the questionnaire cannot be saved unfinished. Consequently, it must be completed at one go.
- ✓ If more than one person at your workplace has familiarized him-/herself with the Toolkit, we wish you to formulate your answers together, and one person completes the questionnaire for all.
- ✓ At the end of the questionnaire you have the possibility to leave comments concerning the Toolkit, the pilot, or the questionnaire.

### Privacy protection

- ✓ The questionnaire is completed anonymously.
- ✓ Collected data will be treated confidentially according to the EU General Data Protection Regulation (GDPR).
- ✓ Collected data will be stored in a protected file, which only the members of the research group have access to, and will not be handed over to anyone outside the research group.
- ✓ Collected data will be analysed and the results will be reported on a group level, which means that the identification of individual respondents or organizations the respondents represent is not possible.

## Annex 8 – Follow-up questionnaire of the pilot

### Informed consent

This survey arises from the Joint Action CHRODIS PLUS, a three-year (2017–2020) initiative aiming to support EU member states in facing the burden of non-communicable diseases by promoting the implementation of best practices. CHRODIS PLUS is funded by the European commission and participating partner organizations.

The objective of this survey is to collect feedback and user experiences on one of the products of CHRODIS PLUS, the Toolkit for workplaces, to enable its further development. The questionnaire is completed anonymously, and the data collected will be treated confidentially according to the EU General Data Protection Regulation (GDPR). The collected data will be stored in a protected file, which only the members of the CHRODIS PLUS research group have access to, and will not be handed over to anyone outside the research group. The collected data will be analysed and the results of the survey reported on a group level, which means that the identification of individual respondents or organizations the respondents represent is not possible.

I give my informed consent to use the data I provide by filling in this questionnaire in the development of the CHRODIS PLUS Toolkit for workplaces, and in reporting the results of this survey.

\*\*\*

### Questionnaire

Dear participant,

Welcome to fill in the second and last questionnaire of the CHRODIS PLUS pilot of the Toolkit for workplaces. This questionnaire focuses on the implementation of Toolkit means and experiences gained from it. Having the Toolkit document at hand while completing this questionnaire is recommended. Completing the questionnaire takes approximately ten minutes.

\*\*\*

### Background questions

1. What is the field of operation/ sector of the workplace you represent?
2. What is your job title at the workplace?

\*\*\*

### Implementation of Toolkit means

3. During the pilot, did your workplace implement any of the means suggested in the Toolkit?
  - a. Yes [*→ shift to question 4*]
  - b. No [*→ shift to question 18*]

\*\*\*

4. Which Toolkit means did your workplace implement? Please provide the subheading number and name of each implemented means. For example, 2.1 Face-to-face support, 3.2 Attractive stairwell.
5. Which factors facilitated the implementation? Please select all the alternatives that apply to your workplace.
  - a. The means were needed.
  - b. The means were feasible.
  - c. The means were accepted by the employees.
  - d. Motivation to implement
  - e. Management's support
  - f. Funding
  - g. Time
  - h. Personnel
  - i. Availability of needed materials and/or facilities
  - j. Some other factor, what? \_\_\_\_\_
6. Which factors challenged the implementation? Please select all the alternatives that apply to your workplace.
  - a. The means were not needed.
  - b. The means were not feasible.
  - c. The means were not accepted by the employees.
  - d. Lack of motivation to implement
  - e. Lack of management's support
  - f. Lack of funding
  - g. Lack of time
  - h. Lack of personnel
  - i. Lack of needed materials and/or facilities
  - j. Lack of information on how to implement the means
  - k. Some other factor, what? \_\_\_\_\_
7. Did the implementation require new monetary investments from your workplace? For example, hiring new workforce, procurement of materials or external consultation or services.
  - a. Yes
  - b. No
8. The implementation of the means (designing, organizing, and executing) may have required input from more than just one individual. Please list here the job titles of all individuals that were involved

in the process. For example, executive assistant, team leader, production worker, occupational nurse.

9. Would it have been useful to have additional people involved in the implementation process?
- Yes [→ *shift to question 10*]
  - No [→ *shift to question 12*]

\*\*\*

10. Who else would you have involved in the implementation process? Please provide the job title(s) of the(se) individual(s). For example, executive assistant, team leader, production worker, occupational nurse.

11. How could the(se) individual(s) have contributed to the implementation process?

\*\*\*

12. How long did your workplace maintain the implemented means?

- Less than a month
- 1–3 months
- Over 3 months

13. Within this time, did you observe any effects? With effects, we mean for example changes in the attitudes or behaviour of the employees.

- Yes [→ *shift to question 14*]
- No [→ *shift to question 16*]

\*\*\*

14. What kind of effects did you observe?

15. How did you notice the effects? For example, based on your personal feelings or observations, verbal or written feedback gained from employees or supervisors, changes in absenteeism.

[→ *shift to question 16*]

\*\*\*

16. Is your workplace going to continue to implement the means after the pilot?

- Yes [→ *shift to question 20*]
- No [→ *shift to question 17*]

\*\*\*

17. Why is your workplace not going to continue the implementation? Please select all the alternatives that apply to your workplace.

- a. The means are not needed.
- b. The means were not feasible.
- c. The means were not accepted by the employees.
- d. Lack of motivation
- e. Lack of management's support
- f. Lack of funding
- g. Lack of time
- h. Lack of personnel
- i. Lack of needed materials and/or facilities
- j. The means did not yield desired effects.
- k. Some other factor, what? \_\_\_\_\_

[→ shift to question 20]

\*\*\*

[Question 18 only for respondents having selected alternative b. in question 3]

18. Did your workplace determine to implement one or more Toolkit means, but eventually did not?

- a. Yes [→ shift to question 19]
- b. No [→ shift to question 20]

\*\*\*

19. Which were the reasons for not implementing the determined means? Please select all the alternatives that apply to your workplace.

- a. The means were not needed.
- b. The means were not feasible.
- c. The means were not accepted by the employees.
- d. Lack of motivation to implement
- e. Lack of management's support
- f. Lack of funding
- g. Lack of time
- h. Lack of personnel
- i. Lack of needed materials and/or facilities
- j. Lack of information on how to implement the means
- k. Some other factor, what? \_\_\_\_\_

[→ shift to question 20]

\*\*\*



20. Is your workplace planning to implement some new Toolkit means after this pilot?

- a. Yes
- b. No

[→ *shift to question 21*]

### **Suggestions for improvement**

21. Comments and feedback on the Toolkit and/or the pilot

\*\*\*

Thank you for your valuable contribution!

## Annex 9 – CHRODIS PLUS Toolkit for Workplaces



# CHRODIS+

IMPLEMENTING GOOD PRACTICES FOR CHRONIC DISEASES

Fostering employees' wellbeing,  
health, and work participation

## Toolkit for Workplaces



This Toolkit arises from the joint action CHRODIS-PLUS which has received funding from the European Union's Health Programme (2014-2020)



*The content of this report represents the views of the authors only and is their sole responsibility; it cannot be considered to reflect the views of the European Commission and/or the Consumers, Health, Agriculture and Food Executive Agency or any other body of the European Union. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.*

## Authors

Finnish Institute for Health and Welfare (THL), Finland (WP8 Co-leader):

Eeva Rantala

Jaana Lindström

Päivi Valve



Fondazione IRCCS Istituto Neurologico Carlo Besta (FINCB), Italy (WP8 Leader):

Matilde Leonardi

Fabiola Silvaggi

Chiara Scaratti

Erika Guastafierro

Claudia Toppo

Michela Eigenmann

National Institute for Public Health and the Environment (RIVM), the Netherlands:

Karin Proper

Sandra van Oostrom

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Lars Münter, The Danish Committee for Health Education (DCHE), Denmark

Jūratė Grubliauskienė and Neringa Petreikyte, Klaipėda's City Public Health Bureau, Lithuania

András Terebessy, Semmelweis University, Hungary

Jérôme Focaud, The French National Cancer Institute (INCa), France

Joop van Griensven, Pain Alliance Europe (PAE), Belgium

Lyudmil Ninov, European Patients' Forum (EPF), Belgium

Leila Karhunen, University of Eastern Finland (UEF), Finland

Stefanie Mayrhofer, University of Applied Sciences, Wiener Neustadt, Austria

Mari Olkkonen, THL, Finland

Reetta Eerikäinen, THL, Finland

VTT Technical Research Centre of Finland Ltd., Finland

## Product of Joint Action CHRODIS PLUS

This Toolkit was developed within Joint Action CHRODIS PLUS ([chrodis.eu](http://chrodis.eu)), a three-year (2017–2020) initiative under the Third Health Programme (2014–2020) aiming at sharing best practices to aid EU member states alleviate the burden of non-communicable diseases. CHRODIS PLUS was funded by the European Commission and the participating partner organizations.

## The CHRODIS+ Workbox on Employment and Chronic Conditions



The CHRODIS+ Workbox supports EU member states and their workplaces in creating working conditions that foster wellbeing, health, and work ability, prevent the development of chronic diseases, and help individuals with chronic health problems to continue working. It brings benefits for employees and employers, as well as the entire society. The CHRODIS+ Workbox consists of the following two tools:

### 1) THE TRAINING TOOL FOR MANAGERS ON INCLUSIVENESS AND WORK ABILITY FOR PEOPLE WITH CHRONIC CONDITIONS

The Training Tool is directed to managers of all kinds of workplaces. It aims to raise managers' awareness on the benefits of inclusion and good management of employees with or at risk of chronic health problems at the workplace. It also provides information on and tools for measuring and strengthening the inclusion and work ability of employees with chronic conditions. The information and tools included in the Training Tool consider human functioning, personal capabilities, and commonalities of chronic diseases, and they help ensuring that the work environment is a facilitator, not a barrier to better inclusion and work ability of all employees.

### 2) THE TOOLKIT FOR WORKPLACES - FOSTERING EMPLOYEES' WELLBEING, HEALTH, AND WORK PARTICIPATION

The Toolkit collects concrete, evidence-based, and practically proven means through which workplaces can support the wellbeing and health, and enhance the work participation of all employees, regardless of their work ability and health status. In addition, the means included in the Toolkit aid to prevent chronic health problems. The Toolkit serves both as a checklist and as an idea generator, and facilitates taking concrete and feasible actions towards a health-supporting workplace.

In the Toolkit, the shaking hands symbol below indicates that more information on the topic in question can be found in the CHRODIS+ Training Tool for Managers. Numbers 1 and 3 in the symbol refer to equivalent Training Tool sections, and the letters I and A refer to introduction and appendix, respectively.



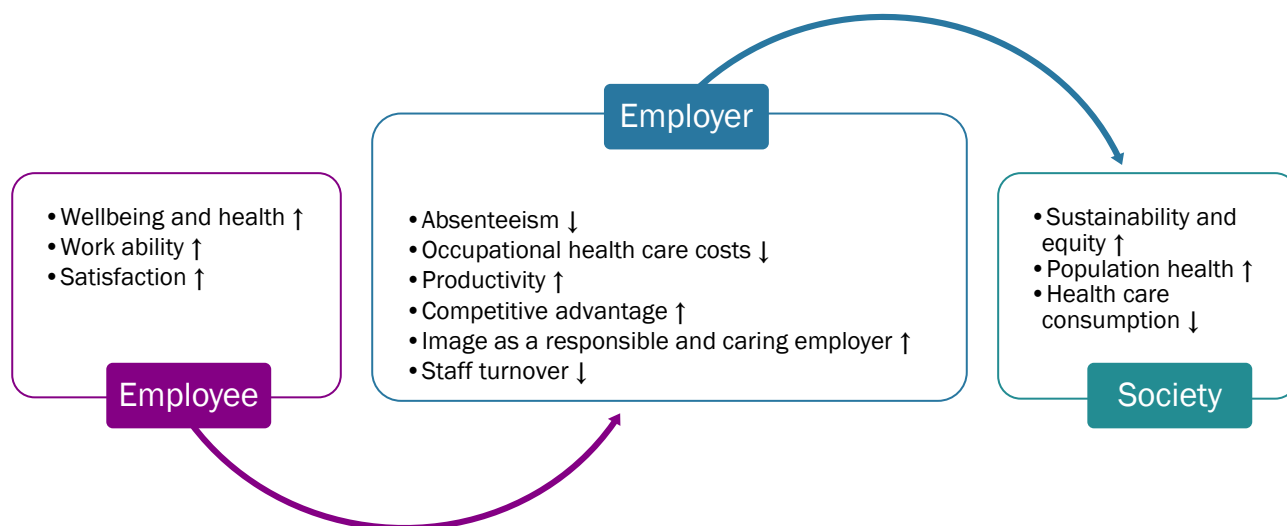
## Content

<b>1 Introduction</b>	5
<b>2 Nutrition</b>	9
2.1 Strengthen knowledge and skills	10
2.2 Create supportive working environment	10
2.3 Adopt wellbeing-fostering policies	12
2.4 Incentivize	13
<b>3 Physical activity</b>	14
3.1 Strengthen knowledge and skills	15
3.2 Create supportive working environment	16
3.3 Adopt wellbeing-fostering policies	18
3.4 Incentivize	19
<b>4 Ergonomics</b>	20
4.1 Strengthen knowledge and skills	20
4.2 Create supportive working environment	21
4.3 Adopt wellbeing-fostering policies	21
4.4 Incentivize	22
<b>5 Mental health and wellbeing</b>	23
5.1 Strengthen knowledge and skills	23
5.2 Create supportive working environment	24
5.3 Adopt wellbeing-fostering policies	25
5.4 Incentivize	25
<b>6 Recovery from work</b>	26
6.1 Strengthen knowledge and skills	26
6.2 Create supportive working environment	27
6.3 Adopt wellbeing-fostering policies	27
6.4 Incentivize	28
<b>7 Community spirit and atmosphere</b>	29
7.1 Strengthen knowledge and skills	29
7.2 Create supportive working environment	29
7.3 Adopt wellbeing-fostering policies	30
7.4 Incentivize	30
<b>8 Smoking cessation and reduction of excess alcohol consumption</b>	31
8.1 Strengthen knowledge and skills	31
8.2 Create supportive working environment	31
8.3 Adopt wellbeing-fostering policies	32
8.4 Incentivize	32
<b>9 References and further reading</b>	33
<b>Appendix 1.</b> Checklist form for mapping current means and for planning future actions at the workplace	
<b>Appendix 2.</b> Factors that facilitate successful implementation of wellbeing, health, and work participation promoting actions at the workplace, and encourage employees to make use of these actions	
<b>Appendix 3.</b> Early identification model for supporting employees' wellbeing, health, and work ability	

## 1 Introduction

### Why invest in employees' wellbeing, health, and work participation?

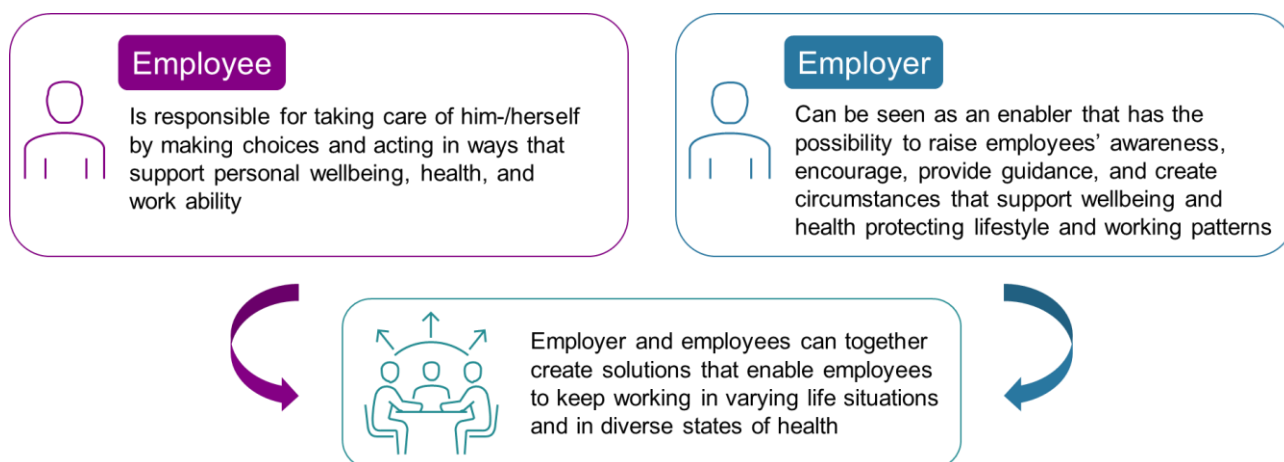
Fostering employees' wellbeing, health, and work participation benefits both employees and employers, as well as the society, in several ways (**Figure 1**).



**Figure 1.** Benefits of investing in employees' wellbeing, health, and work participation.

### Wellness at work is everybody's business

Employers and employees have a shared responsibility in the promotion of employees' wellbeing, health, and work participation (**Figure 2**). This Toolkit provides employers ideas on how to create a workplace that thrives through taking care of its personnel.



**Figure 2.** Employers' and employees' responsibilities in the promotion of wellbeing, health, and work participation.





## What is this Toolkit made of?

The Toolkit collects means through which workplaces can support the wellbeing and health, and enhance the work participation of all employees, regardless of their current work ability and health status. In addition, the means of the Toolkit aid to prevent chronic health problems, such as cardiovascular diseases, type 2 diabetes, musculoskeletal disorders, depression, and lung diseases. More information on some of the most frequent chronic diseases can be found in the Appendix of the CHRODIS+ Training Tool for Managers.

## Whom is the Toolkit designed for?

The Toolkit is designed for the use of all parties involved in fostering occupational wellbeing and health, such as the human resources personnel, the management of workplaces, occupational health care, and catering service providers.

## How was the Toolkit developed?

The means of the Toolkit have been selected based on a groundwork comprising three systematic literature studies, and dozens of interviews conducted with managers and employees of workplaces of various industries, as well as occupational wellbeing and health professionals in several European countries. The groundwork was completed to map scientific evidence and to collect empirical data on effective and feasible actions workplaces can take to promote personnel's wellbeing, health, and work participation, and to prevent the development of chronic health problems. In addition, the groundwork identified factors that facilitate the implementation of such actions at workplaces, and factors that encourage employees to make use of the opportunities their workplaces provide them for fostering personal wellbeing and health. The structure and the content of the Toolkit arise from this groundwork.

## How is the Toolkit structured?

The content of the Toolkit is categorised into **seven domains** (Figure 3), each important to overall wellbeing and health, and each of which a workplace has the potential to advance. Every domain includes **various types of approaches**, and under each approach, there are suggestions for **concrete means** to improve employees' wellbeing and health within that domain. Many of the proposed means are relatively effortless to put into action, meaning that their execution does not require major investments as regards personnel, time, or material. These means are indicated with a thumb:



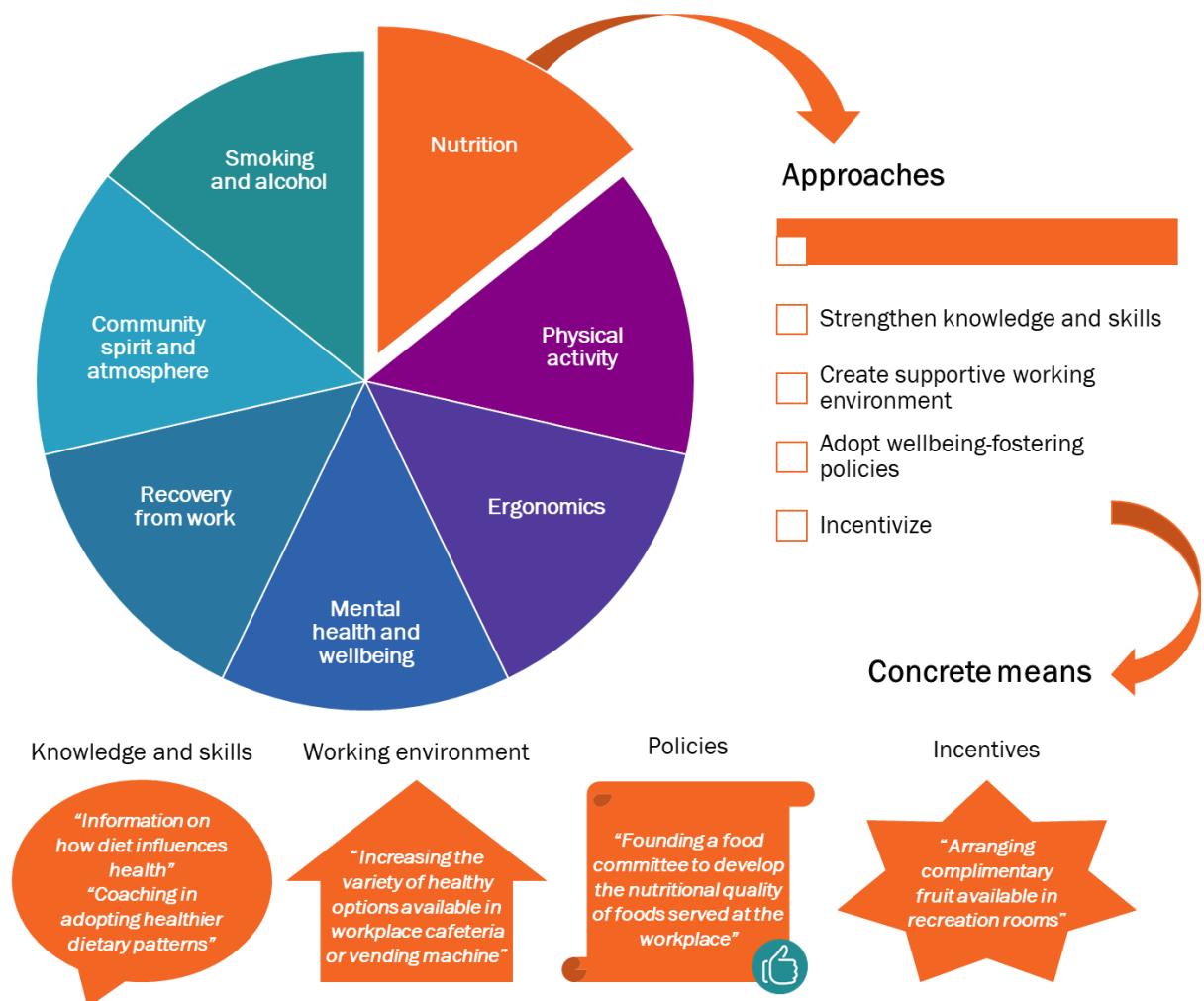
## How to use the Toolkit?

The Toolkit can be used both as a checklist and as an idea generator. Browsing through its content you can first map which Toolkit domains already have been paid attention to, and which approaches and means currently are in use in your organization. In **Appendix 1** you can find a checklist form that can help you in doing this. The mapping aids you to recognise factors that already support your employees to feel well at their workplace. Be proud of what you have accomplished by now, and keep sustaining all the existing good.

Next, you can consider which domains you could still work on to best support the employees of your workplace. What would your employees need the most to stay well and to be able to

work also in the future? Having identified the most important development domains, take a closer look at the concrete means the domains contain. Which of the means would be the most beneficial and feasible in your organization? Choose 1–3 such means at a time, and plan how and when you will put them into action. The means of the Toolkit are examples, and hence, when implemented, they can be adjusted to find the best fit for each workplace. For more information on how to ensure successful implementation, have a look at [Appendix 2](#) that collects factors identified to facilitate the implementation of wellbeing, health, and work participation promoting actions at the workplace, and factors that encourage employees to make use of these actions. For an example of a more comprehensive protocol for identifying and finding solutions to employees' potential health challenges early on, please refer to [Appendix 3](#).

The domains of the Toolkit are interconnected, and many of the Toolkit means have beneficial effects on more than just one domain. Targeting various domains, using diverse approaches, and combining several means are likely to result in the greatest effects.



**Figure 3.** The structure of the Toolkit and some examples of the means within each approach.

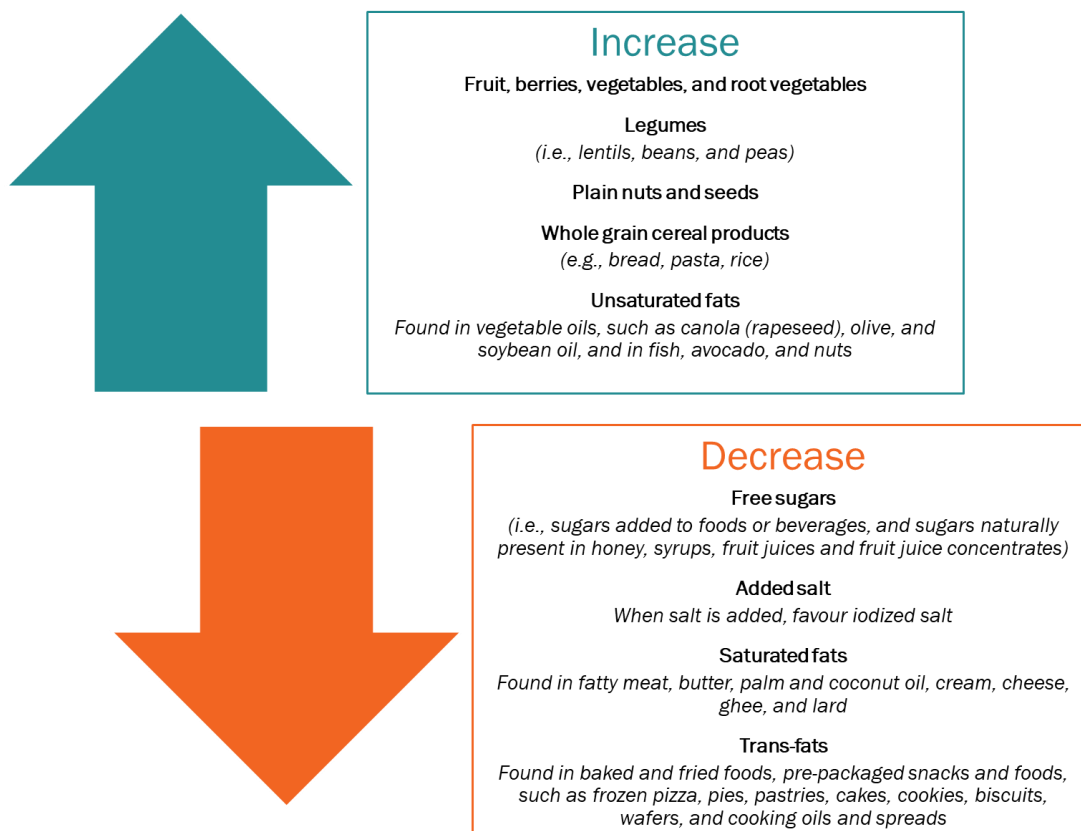
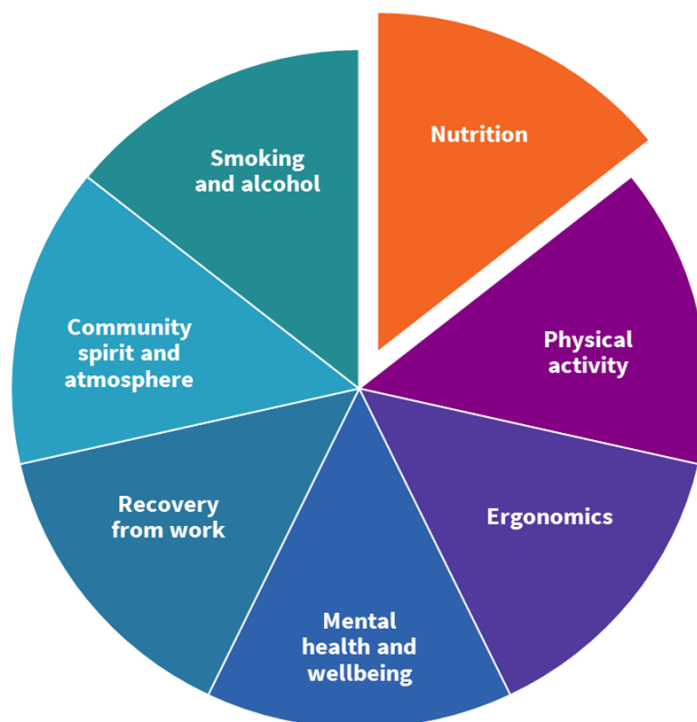
## Means for all kinds of workplaces

Since workplaces are highly variable, also the means that are feasible for implementation and needed among employees vary across workplaces. For example, there is no need to encourage employees to use stairs instead of elevator in a building that has no elevator, or to reduce time spent sitting among employees that spend most of their working hours standing and walking. We hope that this Toolkit can provide each workplace at least a couple of viable ideas on how to improve employee's wellbeing, health, and work participation considering available resources and employees' specific needs. There are plenty of things that can be done also with limited resources, and even small measures have the potential to considerably improve employees' wellbeing and job satisfaction. Each action counts!

## 2 Nutrition

A workplace has excellent possibilities to support employees in adopting and maintaining healthy dietary patterns: eating regularly and making smart food and beverage choices. When planning actions to do this, it is important to know what kind of dietary choices in general are beneficial for all employees. **Figure 4** displays basic principles that pave the way for a diet that promotes health, as well as aids to prevent and manage chronic diseases, such as cardiovascular diseases and type 2 diabetes. These principles are recommended to be followed when designing the selection of foods and beverages available at the workplace – in staff restaurants, cafeterias, vending machines, recreation rooms, meetings, and any other circumstances in which food and beverages are served.

Some employees may have dietary restrictions, for example due to food intolerances or allergies, but from a balanced selection of healthy alternatives, it is possible also for them to find options that meet their personal needs.



**Figure 4.** Guidelines towards a healthier diet. [WHO 2018](#)

## 2.1 Strengthen knowledge and skills

All nutrition counselling and training is recommended to be provided by an authorized nutritionist or equivalent health care professional with a qualification in nutrition and health.

Means	Description
Measurements	Possibility for employees to measure for example body weight, body composition, blood pressure, blood glucose, and/or blood lipids to raise awareness of personal health status, and receive tailored recommendations based on the measurement results. This can be done for example during health checks or theme days arranged at the workplace.
Education	Providing employees education on healthy diet and its health benefits, for example in the form of lectures, workshops, or information stands.
Digital support	Possibility for employees to use a digital lifestyle training application (used e.g. on a computer or smartphone) that supports in improving dietary patterns and enables monitoring progress in lifestyle change process.
Self-monitoring tools	Possibility for employees to use a digital food diary application that enables self-monitoring dietary patterns, food and nutrient intake, and progress in reaching personal dietary goals.
Face-to-face support	Possibility for empowering individual or group-based counselling involving <ol style="list-style-type: none"> <li>1. provision of factual information/an educational component (e.g., how diet influences health; recommended dietary choices)</li> <li>2. boosting motivation (e.g., weighing pros and cons of making lifestyle changes)</li> <li>3. goal-setting and action planning (setting concrete, achievable goals for changing dietary habits, making an action plan to achieve these goals, and identifying and reducing barriers for following the plan)</li> <li>4. skills training (e.g., learning to identify healthy food and beverage alternatives, and to cook healthy food), and</li> <li>5. receiving feedback and monitoring progress.</li> </ol>
Access to dietitian	Possibility for employees to consult a dietitian, for instance by including authorized nutritionist's services in the contract made with occupational health care service provider, encompassing for example 5 nutritionist's appointments/employee on occupational doctors' referral.








## 2.2 Create supportive working environment

When designing the selection and nutritional content of foods and beverages available at the workplace – in staff restaurants, cafeterias, vending machines, recreation rooms, conferences, and any other circumstances in which food and beverages are served – consulting an authorized nutritionist or equivalent professional with a qualification in nutrition and health is recommended.

### Physical environment



Means	Description
<b>AVAILABILITY</b>	
Staff restaurant	Possibility for employees to eat in a workplace staff restaurant or in an agreement restaurant outside the workplace.
Increased selection	Increasing the variety of healthy food and beverage alternatives* available at the workplace, for example in the cafeteria or vending machines.

Means	Description	
Improved nutritional quality	Improving the nutritional quality of food and beverage alternatives* available at the workplace.	
Facilities for having packed lunch	Making kitchen, kitchenware (e.g., microwave, fridge, coffee maker, tableware), and dining area available for the use of employees that eat packed lunch at the workplace to facilitate cold storing, preparing, heating, and eating a meal.	
Healthy options for shift workers	Possibility also for (night) shift workers to buy healthy food* at the workplace, for example by providing refrigerators filled with a selection of ready meals (salads, sandwiches, warm meals, etc.).	
Healthy options on work trips	Enabling employees whose work includes frequent travelling to have accommodation providing food with high nutritional quality*.	
Water taps	Making sure water taps or dispensers are easily available for all employees.	
<b>PRESENTATION</b>		
Healthy options in separate dishes	Increasing the perceived variety of healthy food and beverage alternatives* available at the workplace, for example by serving various types of fruit and vegetables from separate serving dishes instead of mixing them together.	
Unhealthy options mixed together	Decreasing the perceived variety of less healthy food and beverage alternatives* (e.g., confectionery) at the workplace by serving all varieties from one serving dish instead of serving all varieties from separate serving dishes.	
Attractiveness	Displaying healthy food and beverage alternatives* available at the workplace, for example fruit and vegetables, attractively.	
<b>PLACEMENT</b>		
Making healthy salient	Placing healthy food and beverage alternatives* available at the workplace on spots that are salient, easy-to-notice, on eye-level, and easy-to-access; first in the sequence of alternatives served on a buffet, in the middle of a serving tray or showcase, and physically closer to the consumer.	
Making unhealthy less salient	Placing less healthy food and beverage alternatives* available at the workplace on spots that are less salient, less easy-to-notice, and less easy-to-access; last in the sequence of alternatives served on a buffet, at the edge of a serving tray or showcase, and physically further away from the consumer.	
Healthy options first on menu	Placing healthy food and beverage alternatives* first on the menu at the workplace staff restaurant or cafeteria.	
<b>LABELLING</b>		
Nutritional labels	Labelling available food and beverage alternatives at the workplace prominently and consistently with simple, easy to understand nutritional labels (e.g., health symbols, the Nutri-Score label system, or traffic light colour coding) that take into account the contents of various nutrients (total amount and quality of fat, added sugar and salt, fibre). In this, it is recommended to consult an authorized nutritionist or equivalent health care professional with an academic degree in nutrition and health.	
<b>DEFAULT</b>		
Making healthy the default	Making healthy food and beverage alternatives* the default alternatives, for example in registration forms used for pre-ordering foods to events, or in the serving lines of workplace staff restaurant or canteen.	
<b>COVENIENCE</b>		
Making healthy convenient	Increasing the convenience of selecting and consuming healthy food and beverage alternatives* available at the workplace, for example by serving them ready-to-eat (e.g., fruit and vegetables washed, peeled when needed, and cut into pieces) and pre-portioned.	


Means	Description	
<b>SIZE</b>		
Fruit and vegetables in generous portions	Increasing the portion, package, and unit size of fruit and vegetables available at the workplace.	
Unhealthy options in smaller portions	Decreasing the portion, package, and unit size of less healthy alternatives* available at the workplace.	
Greater tableware for fruit and vegetables	Increasing the tableware used to serve (e.g., serving trays, bowls, spoons, tongs) and consume (e.g., plates, bowls, cutlery) fruit and vegetables.	
Smaller tableware for unhealthy options	Decreasing the size of tableware used to serve (e.g., serving trays, bowls, spoons, tongs) and consume (e.g., plates, bowls, glasses, cutlery) less healthy alternatives* available at the workplace.	

*\*For more details on healthy food and beverage alternatives with high nutritional quality, as well as less healthy alternatives, refer to **Figure 4**.*

## Social environment

Means	Description	
Cultivating positive attitudes	Employer and management can facilitate employees to adopt and maintain healthy lifestyle patterns by cultivating positive attitudes towards wellbeing and health. This way they can contribute to building a social environment in which healthy choices are socially approved, highly valued, and supported by all employees. This starts with using positive words and sharing encouraging thoughts when talking about wellbeing and health.	
Approving, encouraging, and showing the way	Employer and management can facilitate employees to adopt and maintain healthy lifestyle patterns by openly approving of and encouraging employees to act in wellbeing-supporting ways both at work and on leisure time, and by motivating employees to use the opportunities the workplace provides for doing this. In practice, this could mean for instance encouraging employees to have balanced meals with regular intervals to maintain concentration and vitality – and indeed acting as a role model.	

## 2.3 Adopt wellbeing-fostering policies

Means	Description	
Food committee	Founding a committee responsible for developing the nutritional quality* of foods served at the workplace including representatives of the personnel, HR/management, catering service provider, and if possible, an authorized nutritionist or equivalent health care professional with an academic degree in nutrition and health.	

*\*For more details on healthy food and beverage alternatives with high nutritional quality, as well as less healthy alternatives, refer to **Figure 4**.*

## 2.4 Incentivize

Means	Description
Complimentary fruits	Providing healthy* snacks at the workplace free of charge, for example fresh fruit in recreation rooms.
Lunch break	Paid lunch break encourages employees to have a meal break during working hours. Regular meal pattern, in turn, aids maintaining vitality, concentration, and productivity.
Subsidizing healthy options	Reducing the costs of or providing subvention for healthy food alternatives* available at the workplace (e.g., staff restaurant, cafeteria, vending machines, etc.)
Meal benefit	Providing monetary subvention for meals purchased from the workplace staff restaurant/cafeteria, or an agreement restaurant outside the workplace.
Cold storage for travelling employees	Making cold storage of packed lunches possible for employees that travel frequently by car, bus, or train, for example by providing a small cool bag, and hence facilitating having healthy meals, maintaining a regular meal pattern, and enjoying packed lunches fresh also on the go.

*\*For more details on healthy food and beverage alternatives with high nutritional quality, as well as less healthy alternatives, refer to **Figure 4**.*

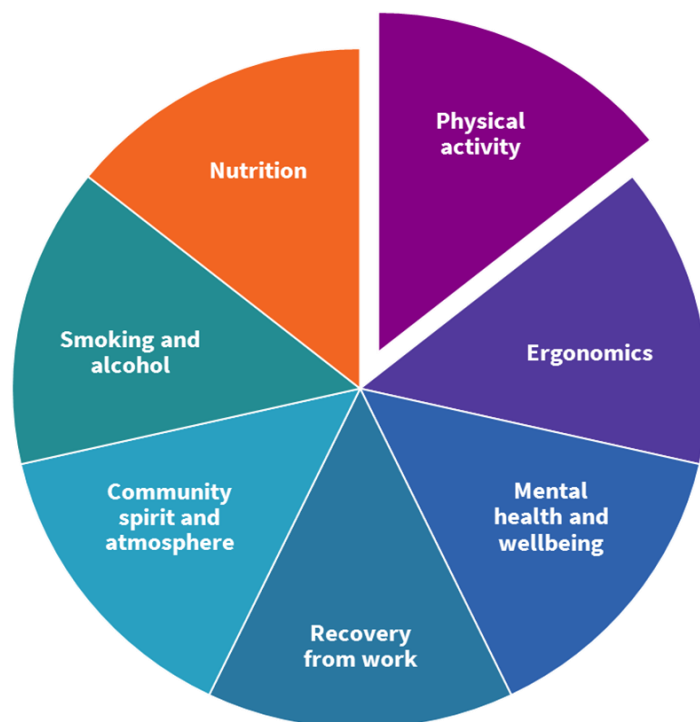


### 3 Physical activity

Research shows that being physically active benefits just about everyone: individuals of all ages and with or without chronic conditions or disabilities. Physical activity not only promotes health and reduces the risk of chronic diseases, but also improves sleep, perceived quality of life, and cognitive functioning, for example attention, memory, and processing speed.

Weekly targets for recommended aerobic and muscle-strengthening physical activity for working age population are shown in **Figure 5**. Nevertheless, all movement that reduces or interrupts sedentary time is valuable. Beneficial health effects can be attained for example by interrupting sitting with short periods of standing, moving around a bit, or light physical activity.

Working environment and workplace policies can encourage physical activity that aids employees to reach their weekly targets and to recover from work-related stress. Short physical activity bouts can be incorporated into the operations of the workplace, and within employees' daily work routines. This section provides examples how.



**Figure 5.** Physical activity recommendations for working age population.

[U.S. Department of Health and Human Services 2018](#)  
[WHO 2010](#)




### 3.1 Strengthen knowledge and skills

All physical activity counselling and training is recommended to be provided by a physiotherapist, a physical education instructor, or equivalent professional with a qualification in exercise and health.

Means	Description
Measurements	Possibility for employees to measure for example body weight, body composition, blood pressure, blood glucose, and/or blood lipids to raise awareness of personal health status, and receive tailored recommendations based on the measurement results. This can be done for example during health checks or theme days arranged at the workplace.
Physical condition tests	Possibility for employees to test for example functional ability, fitness, muscle tone, and/or flexibility to raise awareness of personal physical condition, and receive tailored recommendations based on the measurement results. This can be done for example during theme days arranged at the workplace.
Education	Providing employees education on physical activity and its health benefits, for example in the form of lectures, workshops, or information stands.
Sharing favourite movements	Sharing short (1–2 minutes) and low-threshold break exercise videos on workplace Intranet, info screens, or via email. The videos can be made for example by the employees of the workplace, or physical education instructor students.
Digital support	Possibility for employees to use a digital lifestyle training application (used e.g. on a computer or smartphone) that supports in adding physical activity into daily routines and enables monitoring progress in lifestyle change process.
Self-monitoring tools	Possibility for employees to use an activity logbook, a pedometer, or an activity tracker for self-monitoring physical activity and sedentary time, and progress in reaching personal physical activity goals.
Face-to-face support	<p>Possibility for empowering individual or group-based coaching involving</p> <ol style="list-style-type: none"> <li>1. provision of factual information/an educational component (e.g., how physical activity and sedentary behaviour influence health; physical activity recommendations)</li> <li>2. boosting motivation (e.g., weighing pros and cons of making lifestyle changes)</li> <li>3. goal-setting and action planning (i.e., setting concrete, achievable goals for adding physical activity into daily routines, making an action plan to achieve these goals, and identifying and reducing barriers for following the plan)</li> <li>4. skills training (e.g., guided physical activity sessions to build up physical condition and to learn how to execute movements in a safe way), and</li> <li>5. receiving feedback and monitoring progress.</li> </ol>
Physiotherapist's visits	Occupational physiotherapist visiting the workplace at certain intervals to instruct employees on tailored break exercises that promote recovery from work-induced stress and strain, and help to prevent or treat work-related musculoskeletal problems.
Access to physiotherapy	Possibility for employees to consult a physiotherapist, for instance by including physiotherapy services in the contract made with occupational health care service provider, encompassing for example 5 physiotherapy sessions/employee on occupational doctors' referral.




## Prompt

Means	Description	
<b>EXERCISE BREAKS</b>		
Positively framed messages	Encouraging employees to take short physical activity breaks by delivering positively framed messages, such as messages highlighting the benefits of interrupting long periods of sitting and performing short exercise bouts, on posters, on info-screens, or via email messages.	
Reminders	Using automatic reminders, such as a break exercise application installed into work computer or a wrist-worn activity tracker, to prompt to stand up, step, or have a short physical activity break with pre-set intervals, for example once every 1–2 hours. However, in order not to interrupt workflow, the application should enable employees to postpone or ignore the prompts when timing is not right for a break.	
<b>STAIR-USE</b>		
Motivational messages	Encouraging stair-use with motivational messages for example on posters placed on the point-of-choice between stairs and elevator or escalator. Some tips for designing effective prompts: <ul style="list-style-type: none"> <li>· Using positively framed messages for example highlighting the benefits of using stairs. Since not all employees are interested in fitness, health, weight, and energy expenditure, messages related to other benefits, such as saving time may be more effective.</li> <li>· Including both text and images on posters</li> <li>· Medium (A1–A0) and large (&gt;A0) sized posters are easier to notice, and hence likely to be more effective than small ones (A5–A2).</li> </ul> <p>The effectiveness of messages can be increased by combining them with enhancing the stairwell attractiveness (see section 3.2) and/or using directional signs.</p>	
Directional signs	Encouraging stair-use with directional signs, such as arrows and footprints on the floor, leading to stairwell from the point-of-choice between stairs and elevator or escalator. The effectiveness of these signs can be increased by combining them with enhancing the stairwell attractiveness (see section 3.2) and/or using motivational messages.	

## 3.2 Create supportive working environment

### Physical environment

Means	Description	
<b>REDUCING SEDENTARY TIME</b>		
Shared printers and central coffee machines	Replacing personal printers with work community's shared printers, or moving personal printers from within reach to a distance that requires standing up and taking a couple of steps. Daily steps can be added also by introducing central coffee machines.	
Active sitting	Introducing alternative seats, such as therapy balls, saddle or wobble chairs, or balance cushions to enable active sitting for employees with a sedentary work.	
Active sitting the default	Making active sitting the default option by placing the introduced alternative seats (see previous means) in front of desks.	
Working by standing	Replacing conventional sit-desks with height-adjustable desks to enable working by standing.	



Means	Description
Working by standing the default	Making working by standing the default option, for example by commonly agreeing on a practice of leaving height-adjustable desks in the upper position at the end of the day. Sticky notes attached on easily noticeable spots on employees' workstations can help remembering of doing this in the beginning, before the practice becomes an automatic habit.
Exercise equipment	Introducing light exercise equipment, e.g., gym sticks, balance boards, resistance bands, or hanging bars for employees to use, and placing them on salient spots where employees typically pause for a moment, and an opportunity for a short exercise break occurs (e.g., by printer, micro, kettle, or coffee maker).

### INCREASING STAIR-USE

Attractive stairwell	Encouraging stair-use by making the stairwell more visible and attractive, for example with music, artwork, paintings, plants, and/or lighting. The effectiveness of this action can be increased by combining it with motivational messages and/or using directional signs (see section 3.1).
Slow elevator	Encouraging stair-use by slowing down elevator doors or the elevator or escalator itself



### ACTIVE MEETINGS

Rearranged meeting room	Creating active meetings by enabling physical activity in the meeting room. In practice, this could be done by arranging enough room for standing up, moving around, and stretching. Physical activity can be further encouraged by introducing height-adjustable desks, alternative seats (e.g., therapy balls, saddle or wobble chairs, exercise bikes, or balance cushions on regular chairs), and pads or wheels under chair feet so that moving chairs and standing up can be done silently without disturbance.
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### ACTIVE COMMUTING AND EXERCISE AT WORK

Bike racks	Facilitating bicycle commuting by arranging facilities to park and lock bicycles.
Workplace bikes	Facilitating bicycle commuting and physical activity during working hours by introducing workplace bicycles that can be borrowed for commuting or for running work-related errands.
Shower and dressing room	Facilitating physical activity during, or immediately before or after working hours by arranging a shower and a dressing room for employees.
Sports facilities at the workplace	Arranging sports facilities at the workplace, for example, a gym or a wellbeing room with light exercise equipment, such as gym sticks, resistance bands, balance boards, and stall bars together with illustrated instructions on how to use them.
Sports facilities on work trips	Enabling employees whose work includes frequent travelling to have accommodation with sports facilities, such as a swimming pool or a gym.



## Social environment

Means	Description	
Cultivating positive attitudes	Employer and management can facilitate employees to adopt and maintain healthy lifestyle patterns by cultivating positive attitudes towards wellbeing and health. This way they can contribute to building a social environment in which healthy choices are socially approved, highly valued, and supported by all employees. This starts with using positive words and sharing encouraging thoughts when talking about wellbeing and health.	
Approving, encouraging, and showing the way	Employer and management can facilitate employees to adopt and maintain healthy lifestyle patterns by openly approving of and encouraging employees to act in wellbeing-supporting ways both at work and on leisure time, and by motivating employees to use the opportunities the workplace provides for doing this. In practice, this could mean for instance encouraging employees to perform some stretching once in a while to maintain concentration and vitality – and indeed acting as a role model.	

### 3.3 Adopt wellbeing-fostering policies

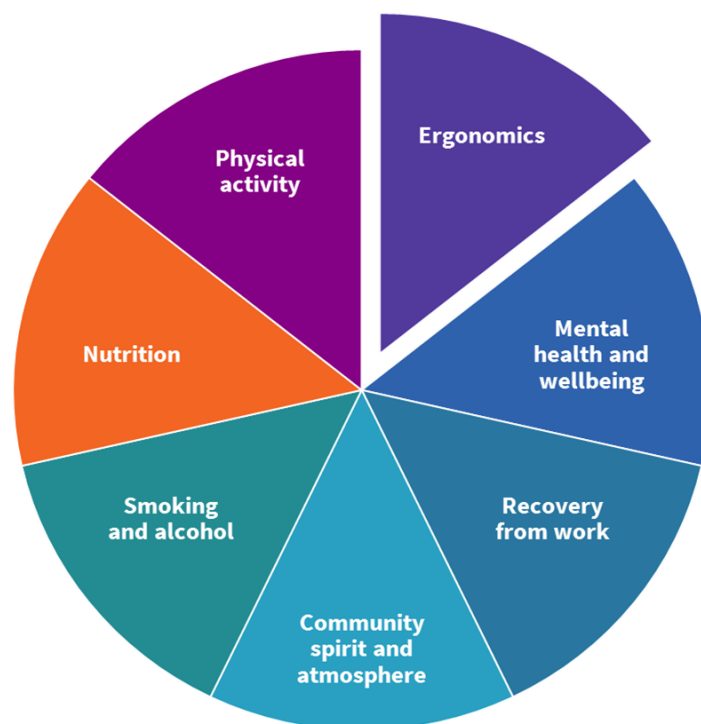
Means	Description	
Physical activity breaks for all	Enabling and encouraging employees, particularly those with jobs tied in one place (e.g., assembly-line workers, cashiers, bus and truck drivers, airline pilots), to have breaks to stand up, take steps, stretch, and exercise in order to maintain concentration and vitality.	
Walk to talk to colleagues	Encouraging employees to stay physically active during working hours while performing ordinary work tasks, for example by commonly agreeing on a practice of walking to talk to colleagues instead of sending e-mails or making telephone calls, and standing and walking during conferences.	
Recreational committee	Designating a recreational committee responsible for organising sports activities.	
Trainers-to-be	Co-operating with sports academies to provide their physical education instructor students a possibility to gain practical experience by arranging activities and providing information for employees at the workplace.	
Peer motivators	Training a part of personnel as "physio motivators" that can give advice, arrange activities, and encourage colleagues to be physically more active.	
Scheduled exercise breaks	Incorporating short (e.g. 10 min.) activity bouts into organizational routines, for example by scheduling instructed exercise breaks led by physical education instructor students or employees of the workplace that have been trained as "physio motivators" (see previous means).	
Active meetings a norm	Creating active meetings and conferences by making physical activity a social norm. At the beginning of a meeting the chairperson can encourage everyone to stand up, walk, and take break exercise whenever they feel like it during the meeting, and follows the given recommendations him-/herself. In addition, agreeing on a practice of giving each speakers a standing ovation is an excellent way to interrupt sitting. Furthermore, it feels encouraging for the speaker.	
Walking meetings	Creating active meetings by arranging walking meetings.	

### 3.4 Incentivize

Means	Description	
Exercise during working hours	Providing employees an opportunity to use working time (e.g., 30–60 minutes per week) for physical activity.	
Challenges	Launching competitions and challenges to motivate employees to add physical activity into daily routines. For example, promising a free vegetarian lunch in workplace staff restaurant/cafeteria or in a nearby restaurant for employees or teams that have collected a certain amount of steps or travelled a certain distance by any form of physical activity.	
Sports groups	Providing opportunities for physical activity, for example by arranging weekly sports groups of employees' choice led for instance by physical education instructor students, or employees of the workplace that have been trained as "physio motivators" (see section 3.3).	
Sports try-out sessions	Arrange try-out sessions or courses of various types of sports.	
Subvention	Providing monetary subvention for (leisure time) sports activities, for example vouchers or bargain prices for fitness centres.	

## 4 Ergonomics

Ergonomics, the science of work, is the process of designing or arranging workplaces, products, and systems so that they fit the people who use them. It promotes a holistic approach to plan the operations of the workplace and to design work tasks so that they can be done fluently, safely, and healthily, considering physical, cognitive, social, organizational, environmental, and other relevant factors. Ergonomics involves three main domains: physical (e.g., working postures and work-related musculoskeletal challenges), cognitive (e.g., adjustments in work processes to decrease mental workload and work stress), and organizational ergonomics (e.g., communication, teamwork, work design, and scheduling). This section provides some suggestions for improving these areas.



[International Ergonomics Association 2020](#)



### 4.1 Strengthen knowledge and skills

All ergonomics counselling and training is recommended to be provided by an ergonomics specialist.



Means	Description
Ergonomics education	Training employees to perform their work ergonomically, for example by adopting a healthy working posture and lifting technique, and by learning to adjust and use available equipment (e.g., height-adjustable desk, adjustable chair, forearm support, tools) ergonomically.
Communication skills	Supporting team building and teamwork by providing employees and managers interpersonal skills training.
Time management training	Improving employees' cognitive ergonomics and productivity with time management training.
Individual supervision of work coaching for managers	Improving managers' cognitive ergonomics and wellbeing with individual coaching sessions. This coaching can comprise support in solving work-related challenges, in noticing the good aspects of own work, in adopting a more positive attitude towards work, and in learning to identify personal strengths, as well as in recognising successes accomplished at work.
Group-based supervision of work coaching for employees	Improving employees' cognitive ergonomics, wellbeing, and team spirit with group-based coaching sessions. This coaching can comprise support in solving work-related challenges, in noticing the good aspects of own work, in adopting a more positive attitude towards work, and in finding joy from working, as well as in learning to identify personal strengths and in recognising successes accomplished at work.

## 4.2 Create supportive working environment





### Physical environment

Means	Description	
Shared responsibility to tidy up	Involving all employees in creating comfortable working environment so that teams take the responsibility to tidy up common working spaces on alternate weeks.	
Ergonomic equipment	Introducing ergonomic equipment, such as adjustable chairs, alternative seats such as wobble or saddle chairs, forearm supports, alternative mice, or lifting aids to prevent and reduce musculoskeletal problems.	
Height-adjustable desks	Replacing conventional sit-desks with height-adjustable desks to enable changing working position.	
Air quality	Ensuring good indoor air quality for example with CO2-meters, air purifiers, and dust binding carpets.	
Air quality on work trips	Enable employees whose work includes frequent travelling to have accommodation with good indoor air quality.	

## 4.3 Adopt wellbeing-fostering policies

Means	Description	
Smart planning of operations	Designing operations of the workplace smartly by <ul style="list-style-type: none"> <li>· planning who does what at the workplace and how</li> <li>· reducing overlapping work, meaning same work done by several employees</li> <li>· improving flow of information within the workplace</li> <li>· ensuring that personal, team, and organizational level goals are clearly set and communicated</li> <li>· advancing leadership</li> <li>· considering which matters each employee should focus on so that they can reach their best possible performance</li> </ul>	
Smart shift scheduling	Favouring a fast-forward (clockwise) rotating shift pattern, in which there are only 1-3 consecutive night shifts, and avoiding short (< 11 hours) shift intervals, such as a morning shift following an evening shift. This promotes recovery between work shifts and good workflow among shift workers.	
Engaging employees in designing environments	Involving employees in designing their working environments (digital, social, and physical) and the rules that apply in them.	
Smart design of activity-based working*	When creating a functional environment for <i>activity-based working*</i> , careful design process in which employees are involved is essential. The designing process should be founded on the goals and operations of the organization, and the demands and behaviours of the employees. Types of working areas could be: open work space, assigned workstations for employees that need permanent, personally adjusted workstations, unassigned workstations for employees that do not need fixed workstations, soundproof phone booths, silent areas for concentration, areas for group work, official meeting rooms, and areas for unofficial collaboration and socializing.	



Means	Description	
Agreeing on rules in activity-based working*	Compiling the rules on how to use the various areas of an activity-based working environment* together with the employees. Monitoring the feasibility of the rules and how well they are followed, and adjusting them when needed. Informing all employees about the rules via multiple channels, such as face-to-face, via email, and by setting the rules visible in an easily noticeable place in the working environment. Different types of working areas can be indicated with colours and/or with signs so that everyone knows how to use and behave in a particular area.	
Flexible work arrangements	Providing employees the possibility for <ul style="list-style-type: none"> <li>flexible working hours</li> <li>remote work</li> <li>adapting work schedules, for example by working 9-hour days Monday through Friday and only 4 hours on Friday</li> <li>adjusting personal workload to meet physical and mental resources</li> <li>reduced working hours when life situation requires it</li> </ul>	 
Smart meeting practices	Saving time and increasing productivity by arranging meetings only when necessary, by setting clear objectives for each meeting, and by inviting only employees that need to be involved	
Ergonomics check-ups	An ergonomics professional together with immediate superiors visit each employees' personal workstations with certain intervals to check that employees have appropriate tools and sufficient knowhow for working ergonomically, and that their workload and work tasks fit their work ability. Possible problems are solved with tailored solutions. Superiors are recommended to be involved in these check-ups so that they become aware of how each employee works, and develop skills to plan work tasks smartly.	
Rotation of work tasks	Promoting job mobility by rotating work tasks, or by providing employees an opportunity to gain work experience in another job for a period of 3–6 months with the possibility to return to old job.	

*\*In activity-based working no employee 'owns' or has an assigned workstation. Rather, the workspace provides employees with a variety of activity areas designated to specific work tasks, such as learning, focusing, collaborating, formal meetings, and socialising. The aim is to give the personnel an opportunity to choose a place in the workspace where it is most suitable for them to complete their work tasks.*

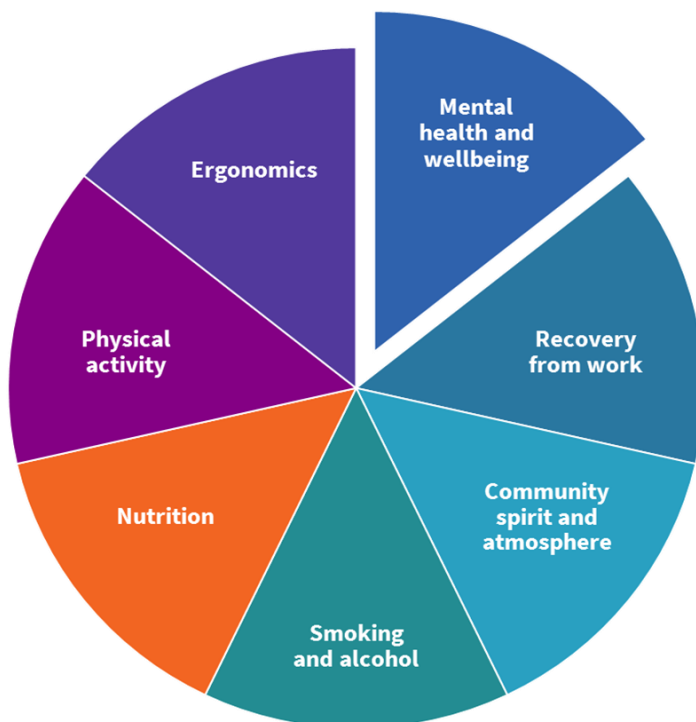
#### 4.4 Incentivize

Means	Description
Internet connection	Provide Internet connection for employees to enable remote working.

## 5 Mental health and wellbeing

Mental health refers to a state of wellbeing in which an individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community. Factors such as stressful work conditions, discrimination, and social exclusion have the potential to impair mental health. On the other hand, appropriate job demands, decision latitude, and social support from colleagues and supervisors advance mental health.

Workplaces are recommended – and have excellent possibilities – to support employees' mental health and wellbeing, and aid employees reach their best possible performance by preventing and managing stress factors particularly related to work organization, work content, and working environment. This section provides some ideas on how this can be done.



[WHO 2018](#)

[European Framework Agreement on Work-Related Stress of 8 October 2004](#)

### 5.1 Strengthen knowledge and skills


In case of severe work-related stress that impairs employees' wellbeing, consulting a professional specialized in the field is advisable. All psychological counselling and training is recommended to be provided by an authorized psychologist or equivalent health care professional with a qualification in psychology.

Means	Description
Assessment of mental health and wellbeing	To get an idea of how employees are doing and what kind of support they need, it is recommended to assess employees' experiences on their mental health and wellbeing, workload, and stress. This can be done in collaboration with occupational health care service provider, for example by conducting a survey or by arranging individual wellbeing discussions between employees, immediate superiors, and health care professionals.
Gentle physical activity	Arranging instructed physical activity, for example, activities arranged in nature, or body-mind techniques such as yoga.
Psychologist's help desk	Possibility for employees to talk to a psychologist at the workplace, and get low-threshold face-to-face counselling related to challenges in personal or work life.



Means	Description
Coping skills	Providing employees individual or group-based coaching in coping and stress management skills. The coaching can be arranged face-to-face or digitally through an application used on a computer or smartphone. The coaching can apply for example cognitive behavioural therapy, positive psychology, mindfulness-based methods, and relaxation technique training.
Communication skills	Supporting team building and teamwork by providing employees and managers interpersonal skills training.
Time management skills	Improving employees' cognitive ergonomics and productivity with time management training.

## 5.2 Create supportive working environment

### Physical environment

Means	Description
Silent space	Introducing a quiet room or space at the workplace where laptops and telephones are not allowed dedicated for relaxation and recharging body and mind during or outside working hours. The room can be equipped with soft lighting, a possibility to listen to calming music, and light exercise equipment (e.g., stall bars or hanging bar, therapy balls, gym sticks, yoga mats) with illustrated instructions for their use to enable meditation and performing restoring physical activity. 
Varying landscapes for working	Creating working environments with various landscapes, for example, a cafeteria, a lounge with sofas, a quiet library-style area, a space with dim lighting, etc. Involving employees in designing the various working spaces and the rules that apply in them.






### Social environment

Means	Description
Supportive, inclusive, and respectful atmosphere	Fostering supportive, inclusive, and respectful organisational climate. For example, arranging interactive workshops in which employees and managers reflect how they can – with their own behaviour – put these values into action at the workplace. All starts with small acts, such as remembering to thank colleagues for their help and acknowledging colleagues for their efforts and successes.  

### Digital environment

Means	Description
Email silence in the evenings	Reducing employees' stress and pressure to work overtime, and improving recovery from work by creating a system, in which emails sent after official working hours are not delivered to the recipient until the following day.

### 5.3 Adopt wellbeing-fostering policies

Means	Description	
Bottom-up policy development	Supporting a bottom-up policy development approach by listening to employees and their hopes and needs, getting to know the things that are important to employees, and aiming at arranging circumstances at the workplace accordingly. In practice, this means involving employees in decision-making and problem-solving processes in matters that influence them. This could be implemented for example by providing employees the possibility to participate in designing work arrangements and working environments (digital, social, and physical) as well as the rules that apply in the working environments, finding out what kind of recreational activities employees wish to have or what type of coffee or tea they enjoy drinking at work. Little things can make a considerable difference.	
Significance of own work	Training managers in helping employees to recognise the significance and importance of their work, and to feel proud of what they do.	
Flexible work arrangements	Providing employees the possibility for <ul style="list-style-type: none"> <li>flexible working hours</li> <li>remote work</li> <li>adapting work schedules, for example by working 9-hour days Monday through Friday and only 4 hours on Friday</li> <li>adjusting personal workload to meet physical and mental resources</li> <li>reduced working hours when life situation requires it</li> </ul>	 
Time off	Enabling employees to have short-term time off from work in case of severe stress or a challenging situation in personal life.	
Rotation of work tasks	Promoting job mobility by rotating work tasks, or by providing employees an opportunity to gain work experience in another job for a period of 3–6 months with the possibility to return to old job.	

### 5.4 Incentivize

Means	Description
Recreational clubs	Providing monetary or material support for work community's recreational clubs, such as photography, handcrafts, or theatre.
Cultural activities	Providing monetary subvention for leisure time cultural activities.

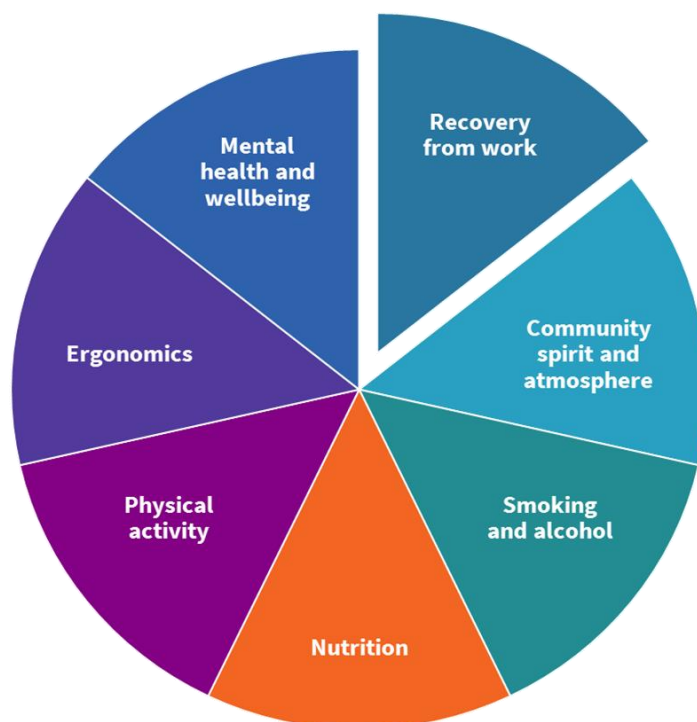
## 6 Recovery from work

An adequate balance between work and rest are prerequisites for a healthy, happy, and productive life. Recovery from work refers to the process of replenishing the physical, cognitive, and emotional resources that have been expended at work. Sufficient recovery makes employees ready for new challenges, increases their work motivation and work performance, improves mental and physical wellbeing, and prevents the accumulation of fatigue and strain. The more intensive and demanding employees' work is, the greater the need for recovery is.

Recovery takes place when employees are properly able to detach from work-related matters both physically and mentally. This can happen during work breaks at the workplace and during leisure time outside

the workplace. Inability to detach from work has the potential to impair sleep. Insufficient sleep, in turn, impairs concentration and work performance, and has been linked with the development of chronic diseases, such as cardiovascular diseases, type 2 diabetes, obesity, and depression.

The workplace can support employees' recovery from work for example by smart work design, and by providing employees tools to take care of themselves.



[Zijlstra and Sonnentag 2006](#)

[Wendsche and Lohmann-Haisla 2017](#)


[Centers for Disease Control and Prevention 2018](#)

### 6.1 Strengthen knowledge and skills




Means	Description
Assessment of recovery	To get an idea of how well employees recover from work and what kind of support they need, it is recommended to assess their recovery status. This can be done for example by conducting a survey that maps employees' experiences on their workload, stress, and work recovery, or with a heart rate variability measurement, an objective indicator of stress-recovery balance.
Education	Providing employees education on the significance of rest, sleep, and recovery for health, for instance in the form of lectures, workshops, or information stands lead by a health care professional specialized in the topic.
Coping skills	Providing employees individual or group-based coaching in coping and stress management skills. The coaching can be arranged face-to-face or digitally through an application used on a computer or smartphone. The coaching can apply for example cognitive behavioural therapy, positive psychology, mindfulness-based methods, and relaxation technique training.

## 6.2 Create supportive working environment

### Physical environment

Means	Description	
Silent space	Introducing a quiet room or space at the workplace where laptops and telephones are not allowed dedicated for relaxation and recharging body and mind during or outside working hours. The room can be equipped with soft lighting, a possibility to listen to calming music, and light exercise equipment (e.g., stall bars or hanging bar, therapy balls, gym sticks, yoga mats) with illustrated instructions for their use to enable meditation and performing restoring physical activity.	
Quiet accommodation	Improving the recovery from work of employees whose work includes frequent travelling by ensuring that the accommodation on work trips has a quiet sound scape.	


### Social working environment




Means	Description	
Cultivating positive attitudes	Employer and management, with their own behaviour, can cultivate positive attitudes towards wellbeing and health. This way they can build a social environment in which adopting and maintaining healthy lifestyle patterns and taking care of oneself are socially approved, valued, and supported by all employees. This starts with using positive words and sharing encouraging thoughts when talking about wellbeing and health.	
Approving, encouraging, and showing the way	Employer and management can facilitate employees to adopt and maintain healthy lifestyle patterns by openly approving of and encouraging employees to act in wellbeing-supporting ways both at work and on leisure time, and by motivating employees to use opportunities the workplace provides for doing this. In practice, this could mean for instance encouraging employees to take breaks from work with regular intervals to maintain concentration and vitality – and indeed acting as a role model.	
Shared events	Arranging recreational social events, such as collective coffee breaks, outdoor activities to get fresh air and physical activity, a get-together at the end of a work week to which employees can arrange activities (e.g., games, tests), etc.	

### Digital environment

Means	Description
Email silence in the evenings	Reducing employees' stress and pressure to work overtime, and improving recovery from work by creating a system, in which emails sent after official working hours are not delivered to the recipient until the following day.

## 6.3 Adopt wellbeing-fostering policies

Means	Description	
Smart shift scheduling	Favouring a fast-forward (clockwise) rotating shift pattern, in which there are only 1–3 consecutive night shifts, and avoiding short (< 11 hours) shift intervals, such as a morning shift following an evening shift, promotes recovery between work shifts and good work-flow among shift workers.	

Means	Description	
Flexible work arrangements	Providing employees the possibility for <ul style="list-style-type: none"> <li>· flexible working hours</li> <li>· remote work</li> <li>· adapting work schedules, for example by               <ul style="list-style-type: none"> <li>➢ working 9-hour days Monday through Friday and only 4 hours on Friday</li> <li>➢ reducing or giving up working evening and night shifts</li> <li>➢ reducing weekend work</li> <li>➢ reducing or giving up intercontinental travelling</li> <li>➢ avoiding over 40-hour-long work weeks</li> </ul> </li> <li>· adjusting personal workload to meet physical and mental resources</li> <li>· reduced working hours when life situation requires it</li> </ul>	 
Rest	Arranging employees a possibility to rest during long work shifts	

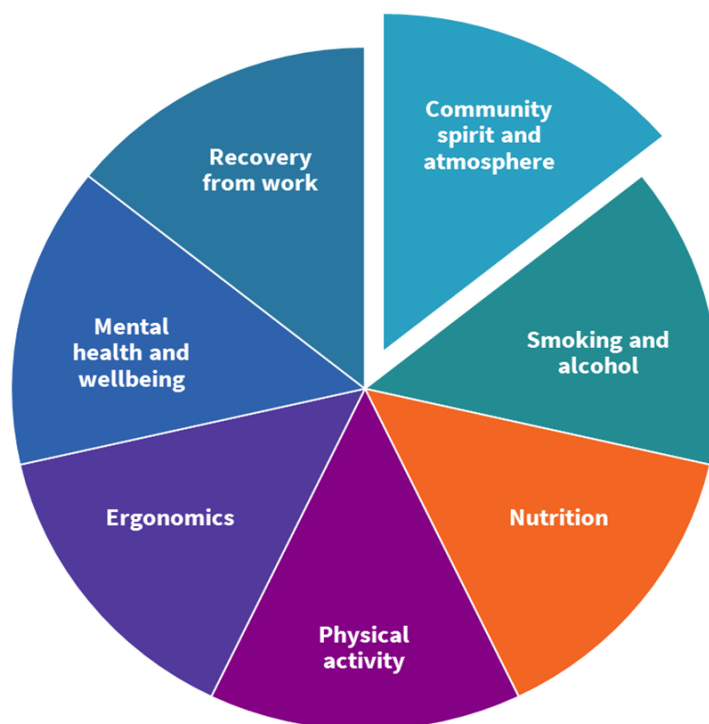
## 6.4 Incentivize

Means	Description
Relaxation	Providing employees an opportunity to use working time (e.g., 30 minutes per week) for relaxation, for example by arranging a workspace for a masseur, and allowing employees to have a massage at a bargain price at the workplace.

## 7 Community spirit and atmosphere

Positive work climate elevates employees' motivation, and inspires them towards higher performance. A supportive work community and good relationships between co-workers also advance mental wellbeing and help getting through challenging periods both at work and in personal life. Perceptions of a good organizational climate have namely been associated with lower levels of burnout, depression, and anxiety among employees. This section provides ideas on how to enhance atmosphere at the workplace.

[Bronkhorst et al. 2015](#)



### 7.1 Strengthen knowledge and skills




Means	Description	
Assessment of perceived work climate	Conducting a survey aids assessing how employees experience the climate at the workplace, and whether actions are required to improve it. A survey can be constructed for example by using items of the <i>Checklist on Environmental Inclusiveness</i> included in the section 1 of the CHRODIS+ Training Tool for Managers.	
Communication skills	Supporting team building and teamwork by providing employees and managers interpersonal skills training.	
Group-based supervision of work coaching for employees	Improving employees' cognitive ergonomics, wellbeing, and team spirit with group-based coaching sessions led by a professional in ergonomics. This coaching can comprise support in solving work-related challenges, in noticing the good aspects of own work, in adopting a more positive attitude towards work, and in finding joy from working, as well as in learning to identify personal strengths and in recognising successes accomplished at work.	

### 7.2 Create supportive working environment


#### Social working environment

Means	Description	
Constructive communication culture	Cultivating constructive and open communication, so that all employees have the courage to express their thoughts and feelings.	
Relationships between employees and superiors	Developing open and trustful relationships between employees and their superiors. This helps employees to disclose possible health challenges at their early stages, and enables the planning of needed adjustments to work arrangements and working conditions.	



Means	Description	
Supportive, inclusive, and respectful atmosphere	Fostering supportive, inclusive, and respectful organisational climate. For example, arranging interactive workshops in which employees and managers reflect how they can – with their own behaviour – put these values into action at the workplace. All starts with small acts, such as remembering to thank colleagues for their help and acknowledging colleagues for their efforts and successes.	
Get together	Opening and/or closing each workweek with a work community's get-together.	
Shared events	Arranging recreational social events, such as collective coffee breaks, outdoor activities to get fresh air and physical activity, a get-together at the end of a work week to which employees can arrange activities (e.g., games, tests), etc.	

### 7.3 Adopt wellbeing-fostering policies

Means	Description	
Overcome language barriers	Facilitating understanding, deeper learning, and affinity by providing information, instructions, and training materials to employees in their mother tongues.	
Peer conciliators	Training a part of personnel as "internal conciliators" that help solving social conflicts between employees or employees and their superiors.	
Professional support	Hiring an internal ombudsman or co-operating with an external advisor to solve social issues, such as bullying or discrimination.	

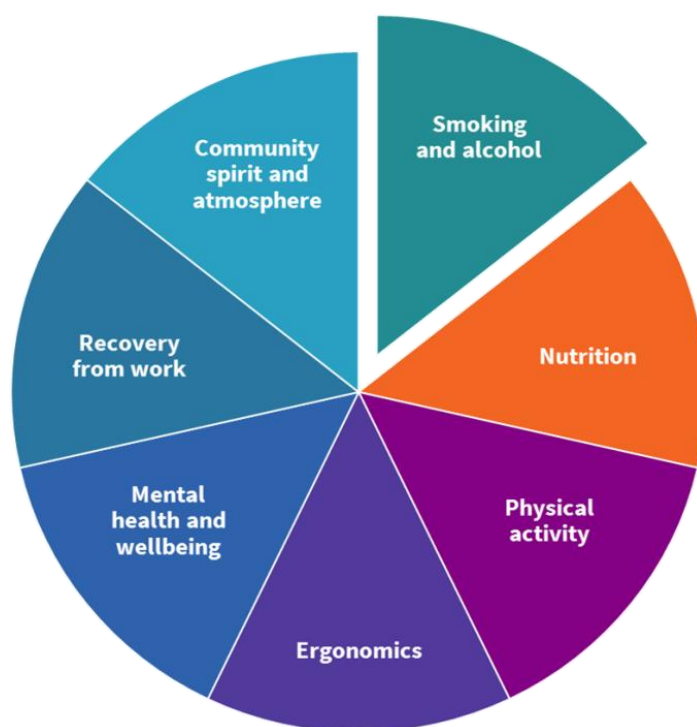
### 7.4 Incentivize

Means	Description	
Recreational allowance	Granting each team of the workplace an annual recreation money to be spent on a social activity (e.g., dinner, sports) of the team members' choice.	

## 8 Smoking cessation and reduction of excess alcohol consumption

Workplace can also provide an important setting for supporting employees to quit smoking and to reduce excess alcohol consumption, major risk factors of chronic diseases, such as cardiovascular diseases, lung diseases, and cancer. As in other domains of the Toolkit, also within this domain combining various approaches, such as education, policies, and incentives, has the potential to lead to greater results.

*WHO 2018*



### 8.1 Strengthen knowledge and skills

Counselling and education is recommended to be provided by an occupational physician.

Means	Description
Education	Providing employees education on the health effects of smoking and alcohol consumption, for instance in the form of lectures, workshops, or information stands, or by disseminating leaflets and posters.
Coaching	Possibility for motivational and empowering counselling to support smoking cessation and/or reduction of excess alcohol consumption. The counselling can be arranged in the form of individual or group-based face-to-face sessions, or through a digital application used on a computer or smartphone.

### 8.2 Create supportive working environment

Means	Description
Cultivate positive attitudes	Employer and management, with their own behaviour, can cultivate positive attitudes towards wellbeing and health. This way they can build a social environment in which adopting and maintaining healthy lifestyle patterns and taking care of oneself are socially approved, valued, and supported by all employees. This starts with using positive words and sharing encouraging thoughts when talking about wellbeing and health.



### 8.3 Adopt wellbeing-fostering policies

Means	Description	
No smoking or alcohol	Non-smoking and no alcohol policies inside and outside the buildings of the workplace	

### 8.4 Incentivize

Means	Description
Challenges	Launching a challenge to motivate employees to quit smoking. For example, promising a gift card or extra holiday for individuals that, by taking nicotine tests, can prove they have not smoked for a period of 12 months. Commitment to the challenge can be reinforced by asking employees to commit to the challenge by signing a commitment contract.
Replacement therapy	Providing monetary subvention for nicotine replacement therapy

## 9 References and further reading

[EU Science Hub, The European Commission's science and knowledge service with documentations and guidance for health promotion and disease prevention](#)

[Recommendations of the European chronic disease alliance \(ECDA\) on improving the employment of people with chronic diseases in Europe 2017](#)

[European Patients Forum \(EPF\) Statement on the 2017 Country-Specific Recommendations on Health and Long-term Care and the European Semester Process](#)

[Lamore et al. Return to Work Interventions for Cancer Survivors: A Systematic Review and a Methodological Critique. Int. J. Environ. Res. Public Health 2019;16:1343. doi:10.3390/ijerph16081343](#)

[Nazarov et al. Chronic Diseases and Employment: Which Interventions Support the Maintenance of Work and Return to Work among Workers with Chronic Illnesses? A Systematic Review. Int. J. Environ. Res. Public Health 2019;16:1864; doi:10.3390/ijerph16101864](#)

[Proper and van Oostrom. The effectiveness of workplace health promotion interventions on physical and mental health outcomes – a systematic review of reviews. Scand J Work Environ Health 2019;45\(6\):546-559. doi:10.5271/sjweh.3833](#)

[Sabariego et al. Effectiveness of Integration and Re-Integration into Work Strategies for Persons with Chronic Conditions: A Systematic Review of European Strategies. Int. J. Environ. Res. Public Health 2018;15:552. doi:10.3390/ijerph15030552](#)

[Silvaggi et al. Employment and Chronic Diseases: Suggested Actions for the Implementation of Inclusive Policies for The Participation of People with Chronic Diseases in the Labour Market. Int. J. Environ. Res. Public Health 2020;17:820. doi:10.3390/ijerph17030820](#)

[European Commission. DG SANTE Public Health Best Practice Portal](#)

[European Agency for Safety and Health at Work \(EU-OSHA\). Tools and resources.](#)

### Nutrition

[WHO 2018. Healthy diet](#)

### Physical activity

[U.S. Department of Health and Human Services 2018. Physical Activity Guidelines for Americans. 2nd edition.](#)

[WHO 2010. Global recommendations on physical activity for health.](#)

### Ergonomics

[International Ergonomics Association 2020. What is Ergonomics?](#)

### Mental health and wellbeing

[WHO 2018. Mental health: Strengthening our response](#)

[EU-OSHA 2004. European Framework Agreement on Work-Related](#)

### **Recovery from work**

[Zijlstra and Sonnentag. After work is done: Psychological perspectives on recovery from work. European Journal of Work and Organizational Psychology 2006;15:129–138.](#)

[Wendsche and Lohmann-Haisla. A meta-analysis on antecedents and outcomes of detachment from work. Frontiers in Psychology 2017;7:2072.](#)

[Centers for Disease Control and Prevention 2018. Sleep and Chronic Disease](#)

### **Community spirit and atmosphere**

[Bronkhorst et al. Organizational Climate and Employee Mental Health Outcomes: A Systematic Review of Studies in Health Care Organizations. Health Care Manage Rev 2015;40:254–71.](#)

### **Smoking cessation and reduction of excess alcohol consumption**

[WHO 2018. Noncommunicable Diseases](#)

## Appendix 1. Checklist form for mapping current means and for planning future actions at the workplace

Means	Already in use	Not yet in use, potentially beneficial and feasible	Selected for implementation
<b>2 Nutrition</b>			
<b>2.1 Strengthen knowledge and skills</b>			
Measurements			
Education			
Digital support			
Self-monitoring tools			
Face-to-face support			
Access to dietitian			
<b>2.2 Create supportive working environment</b>			
<b>Physical environment</b>			
<b>AVAILABILITY</b>			
Staff restaurant			
Increased selection			
Improved nutritional quality			
Facilities for having packed lunch			
Healthy options for shift workers			
Healthy options on work trips			
Water taps			
<b>PRESENTATION</b>			
Healthy options in separate dishes			
Unhealthy options mixed together			
Attractiveness			
<b>PLACEMENT</b>			
Making healthy salient			
Making unhealthy less salient			
Healthy options first on menu			
<b>LABELLING</b>			
Nutritional labels			
<b>DEFAULT</b>			
Making healthy the default			
<b>CONVENIENCE</b>			
Making healthy convenient			
<b>SIZE</b>			
Fruit and vegetables in generous portions			
Unhealthy options in smaller portions			
Greater tableware for fruit and vegetables			
Smaller tableware for unhealthy options			
<b>Social environment</b>			
Cultivating positive attitudes			
Approving, encouraging, and showing the way			
<b>2.3 Adopt wellbeing-fostering policies</b>			
Food committee			
<b>2.4 Incentivize</b>			
Complimentary fruits			
Lunch break			
Subsidizing healthy options			
Meal benefit			
Cold storage for travelling employees			
<b>Own actions</b>			
<b>3 Physical activity</b>			
<b>3.1 Strengthen knowledge and skills</b>			
Measurements			
Physical condition tests			
Education			
Sharing favourite movements			
Digital support			

Means	Already in use	Not yet in use, potentially beneficial and feasible	Selected for implementation
Self-monitoring tools			
Face-to-face support			
Physiotherapist's visits			
Access to physiotherapy			
<b>Prompt</b>			
<b>EXERCISE BREAKS</b>			
Positively framed messages			
Reminders			
<b>STAIR-USE</b>			
Motivational messages			
Directional signs			
<b>3.2 Create supportive working environment</b>			
<b>Physical environment</b>			
<b>REDUCING SEDENTARY TIME</b>			
Shared printers and central coffee machines			
Active sitting			
Active sitting the default			
Working by standing			
Working by standing the default			
Exercise equipment			
<b>INCREASING STAIR-USE</b>			
Attractive stairwell			
Slow elevator			
<b>ACTIVE MEETINGS</b>			
Rearranged meeting room			
<b>ACTIVE COMMUTING AND EXERCISE AT WORK</b>			
Bike racks			
Workplace bikes			
Shower and dressing room			
Sports facilities at the workplace			
Sports facilities on work trips			
<b>Social environment</b>			
Cultivating positive attitudes			
Approving, encouraging, and showing the way			
<b>3.3. Adopt wellbeing-fostering policies</b>			
Physical activity breaks for all			
Walk to talk to colleagues			
Recreational committee			
Trainers-to-be			
Peer motivators			
Scheduled exercise breaks			
Active meetings a norm			
Walking meetings			
<b>3.4 Incentivize</b>			
Exercise during working hours			
Challenges			
Sports groups			
Sports try-out sessions			
Subvention			
<b>Own actions</b>			
<b>4 Ergonomics</b>			
<b>4.1 Strengthen knowledge and skills</b>			
Ergonomics education			
Communication skills			
Time management training			
Individual supervision of work coaching for managers			
Group-based supervision of work coaching for employees			
<b>4.2 Create supportive working environment</b>			
<b>Physical environment</b>			
Shared responsibility to tidy up			
Ergonomic equipment			

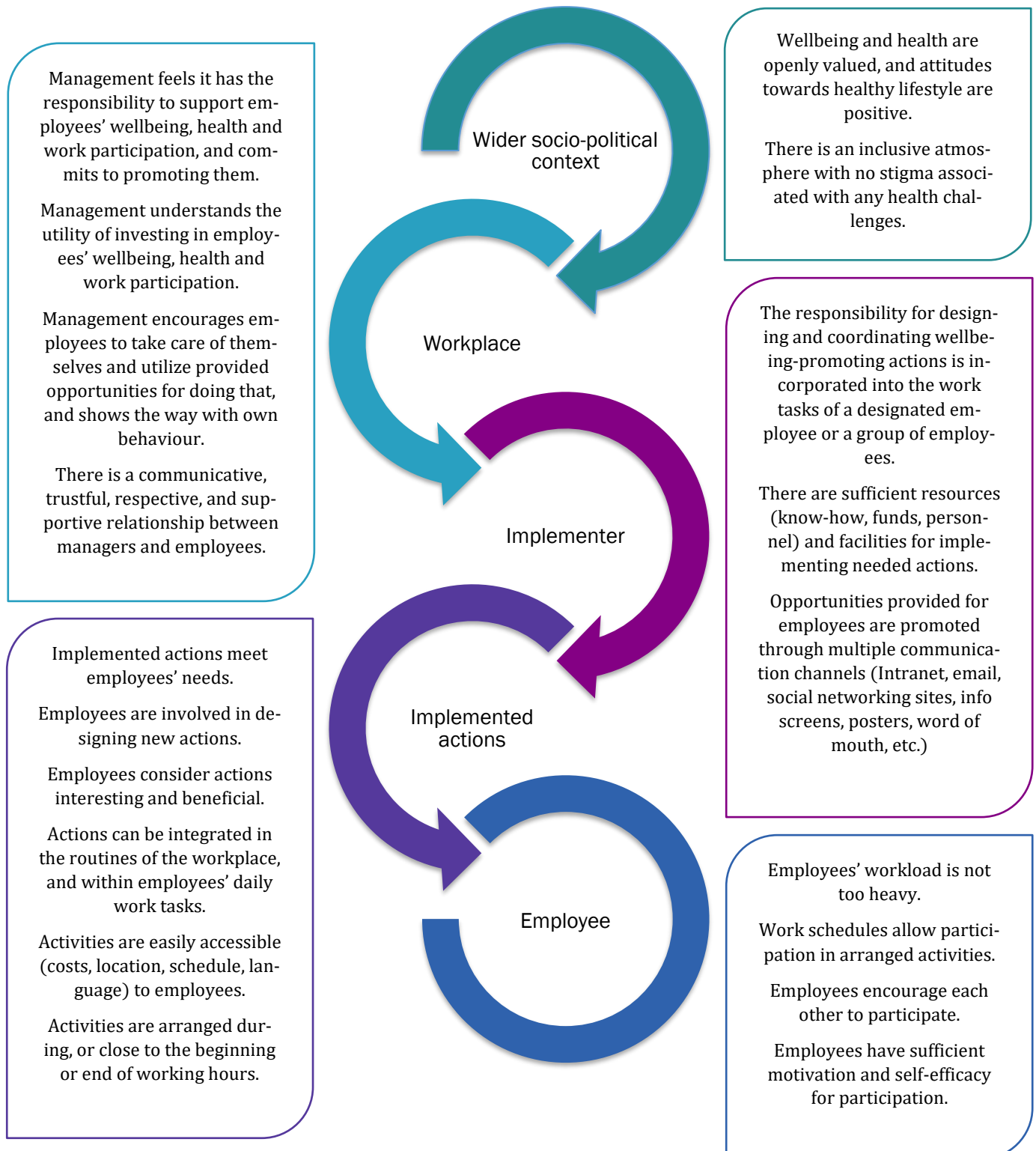
Means	Already in use	Not yet in use, potentially beneficial and feasible	Selected for implementation
Height-adjustable desks			
Air quality			
Air quality on work trips			
<b>4.3 Adopt wellbeing-fostering policies</b>			
Smart planning of operations			
Smart shift scheduling			
Engaging employees in designing environments			
Smart design of activity-based working			
Agreeing on rules in activity-based working			
Flexible work arrangements			
Smart meeting practices			
Ergonomics check-ups			
Rotation of work tasks			
<b>4.4 Incentivize</b>			
Internet connection			
<b>Own actions</b>			
<b>5 Mental health and wellbeing</b>			
<b>5.1 Strengthen knowledge and skills</b>			
Assessment of mental health and wellbeing			
Gentle physical activity			
Psychologist's help desk			
Coping skills			
Communication skills			
Time management skills			
<b>5.2 Create supportive working environment</b>			
<b>Physical environment</b>			
Silent space			
Varying landscapes for working			
<b>Social environment</b>			
Supportive, inclusive, and respectful atmosphere			
<b>Digital environment</b>			
Email silence in the evenings			
<b>5.3 Adopt wellbeing-fostering policies</b>			
Bottom-up policy development			
Significance of own work			
Flexible work arrangements			
Time off			
Rotation of work tasks			
<b>5.4 Incentivize</b>			
Recreational clubs			
Cultural activities			
<b>Own actions</b>			
<b>6 Recovery from work</b>			
<b>6.1 Strengthen knowledge and skills</b>			
Assessment of recovery			
Education			
Coping skills			
<b>6.2 Create supportive working environment</b>			
<b>Physical environment</b>			
Silent space			
Quiet accommodation			
<b>Social environment</b>			
Cultivating positive attitudes			
Approving, encouraging, and showing the way			
Shared events			
<b>Digital environment</b>			





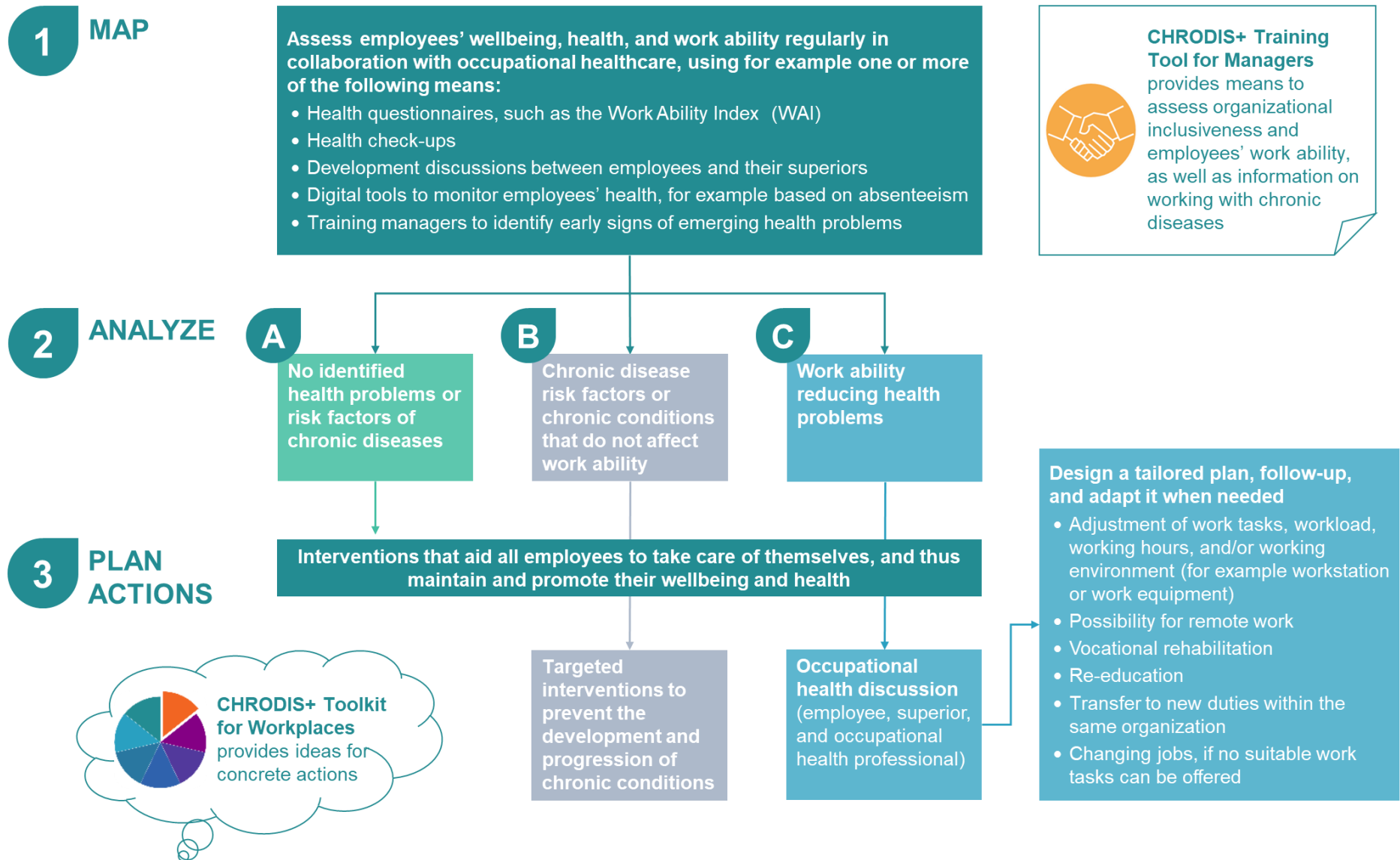


**Appendix 2.** Factors that facilitate successful implementation of wellbeing, health, and work participation promoting actions at the workplace, and encourage employees to make use of these actions



Wierenga et al. What is actually measured in process evaluations for worksite health promotion programs: a systematic review. *BMC Public Health* 2013;13:1190. <https://doi.org/10.1186/1471-2458-13-1190>  
Results of the CHRODIS+ WP8 stakeholder interviews.

### Appendix 3. Early identification model for supporting employees' wellbeing, health, and work ability





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