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# Future-Proofing the High-Performance Organization

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**Abstract:** The future of work is one of the most crucial platforms currently for business leaders as organizations have to prepare themselves to adequately deal with megatrends and disruptors in their technical and physical environments. At the same time, megatrends and disruptors can present both business opportunities and threats. The research question this study dealt with was: How should high-performance organizations (HPOs) address megatrends and disruptors in such a way that they can secure sustainable performance? Thirteen megatrends and one disruptor were matched with the characteristics of HPOs, making use of the HPO Framework, which distinguishes five characteristics (management quality, openness and action orientation, long-term orientation, continuous improvement and renewal, employee quality), for mapping the predicted impact the megatrends and disruptor will have on HPOs. From this mapping exercise, clear opportunities and threats emerged for which solutions, i.e., courses of action to deal with the threats or take advantage of the opportunities, were identified from the literature. These courses of action will help leaders of HPOs in priority-setting and decision-making when making strategic plans and choosing solutions for their own organizations. Unfortunately, this study revealed that academic literature currently falls short at suggesting courses of action that organizations can use to deal with many of the megatrends and disruptors. This result creates an urgent call for in-depth academic research into ways that organizations, and specifically HPOs, should deal with the future of work changes as these courses of action have to be incorporated in future strategies such that they stay relevant for the daily practice of organizations.

**Keywords:** future of work; megatrends; disruptors; high-performance organizations; future-readiness; opportunities and threats

## 1. Introduction

As was the case in previous decades, organizations in the current era have to deal with disruptions in their environments. These disruptions can take the shape of (1) megatrends, described as large social, economic, political, and technological changes that are slow to form, and once in place, have an influence for some time, between seven and ten years, or longer [1], or (2) disruptors, defined as "someone or something that prevents something, especially a system, process or event, from continuing as usual or as expected" [2]. The main difference between megatrends and disruptors is the speed with which they appear and the effects they have, i.e., megatrends are changes that (often gradually) take place over a longer period, while disruptors are short-term, seemingly unexpected sharp changes with a high impact [3]. Both can present business opportunities, but more often than not, they are seen as threats to future business growth or even to the sustainability of the organization [4,5]. A high-performance organization (HPO), defined as "an organization that achieves financial and non-financial results that are exceedingly better than those of its peer group over a period of five years or more by focusing in a disciplined way on that what really matters to the organization" [6] (p. 5), is seen as an organization that potentially thrives because of these disruptions. This is because

average-performing organizations, let alone badly performing ones, in general, have great difficulty in managing disruptions, as these often require a modified or new business model and new ways of working [7]. In contrast, HPOs are known to be well able to cope with changing circumstances because of their flexibility and adaptability [6]. Thus, they achieve "organizational sustainability" [8], defined as the result of the activities of an organization, voluntarily or governed by law, that demonstrate the ability of the organization to viably maintain its business operations (including financial viability, as appropriate) whilst not negatively impacting any social or ecological systems [9]. However, the HPO literature indicates that the above is especially true for short-term challenges, as an HPO is agile and can adapt quickly to problems and opportunities that (suddenly) appear, either internally or in the external environment. This agility is not necessarily suitable for changes that (often gradually) take place over a longer period (the megatrends) or for major short-term sharp changes with a high impact (the disruptors) [7].

Thus, for HPOs to deal adequately with or even thrive from megatrends and disruptors, they need to be innovative enough to prepare themselves for these. Unfortunately, the current academic literature on HPOs does not give them much guidance in this matter, as preciously little has been published on this matter yet [3]. The HPO literature is mainly backward-looking, i.e., it looks at what organizations have done (past tense) to deal with current changing circumstances to become high-performing but does not discuss how they can deal with megatrends and disruptors [7]. To address this gap in the literature and thus help HPOs prepare for future developments, we started a study with the goal of identifying how HPOs should adapt to megatrends and disruptors in such a way that they will remain high-performing. Our research took place in two phases. In the first phase, we undertook a literature review to identify the megatrends and disruptors that were expected to be most likely to appear and to identify what the current literature predicts regarding the effects these megatrends and disruptors will have on organizations' structures, processes, and behaviors. The results of this phase have been described in Linthorst and de Waal [3]. In the second phase, the results of which are described in this paper, the identified megatrends and disruptors were matched with the characteristics of HPOs to specifically identify their effects on this type of organization. In addition, ways to deal with these effects were searched for in the extant literature to be able to propose courses of action for HPOs so they can stay high performing. In this second study phase, we were initially guided by the following research question: How should HPOs address megatrends and disruptors in such a way that they can secure sustainable performance? We, however, quickly realized that we first had to investigate whether the current characteristics of HPOs will still be valid and in place in the (near) future. After all, if this is not the case, it would be virtually impossible to make any predictions, let alone provide solid advice, on how HPOs should deal with megatrends and disruptors. We, therefore, added a research sub-question to be addressed: What are the characteristics of future HPOs?

With our study, we aim to add to the literature on the future management of HPOs. The practical relevance of our study is underscored by Gratton [10], who remarked: "The future of work is one of the most burning platforms of the next few years. Time alone will tell whether the anguish will convert to action." Our study will help prepare leaders of HPOs in their decision-making and prioritization of innovation projects to deal with the future of work—and therefore, the future of their organizations—in an adequate manner. In this way, they will assure organizational sustainability for their HPOs. The remainder of this article is structured as follows. We first describe the HPO Framework [6], which is the framework we use to illustrate the effects of the megatrends and disruptors on HPOs. In this section, we also discuss the "future-proofing" of this framework. Then, we summarize the results of the first phase of our study by describing the thirteen megatrends and one disruptor that were identified during our previous research. After this, we match the megatrends and disruptor with the characteristics of the HPO Framework to map the extent of the predicted impact they will have on HPOs. Subsequently, we look at what guidelines the literature provides us with regarding the way that HPOs can deal with the megatrends and disruptor, and we identify the gaps that warrant

further investigation. The article ends with a conclusion, research limitations, and opportunities for future research.

## 2. Describing the HPO Framework

In this section, the HPO Framework is described (this description is taken from [11]) and its future-proofing is discussed. We have chosen the HPO Framework to evaluate the impact of the megatrends and disruptor on organizations, as this framework is one of the few scientifically validated conceptualizations of HPOs [12,13]. Furthermore, since its origin, it has been validated in numerous longitudinal studies, showing that it is a useful improvement technique for creating and sustaining HPOs over a long period [14,15].

### 2.1. The Development of the HPO Framework

The HPO Framework was developed in two phases: a descriptive literature review and an empirical study in the form of a worldwide questionnaire [16]. The first phase consisted of examining 290 studies on high performance and excellence. To identify HPO characteristics, elements were extracted from each of the publications that the researchers regarded as essential for high performance. These elements were then entered into a matrix, which listed all the factors included in the framework. Because different authors used different terminologies in their publications, similar elements were placed in groups under a factor and each group—later to be named "characteristic"—was given an appropriate description. A matrix was constructed for each factor, listing a number of characteristics, and 189 characteristics were subsequently identified. Next, the weighted importance of each characteristic—that is, the number of times it occurred in the individual study categories—was calculated. Finally, the characteristics with a weighted importance of at least 6% were chosen as the characteristics that potentially make up an HPO, resulting in 35 characteristics.

In the second phase, the 35 potential HPO characteristics were used to compose a questionnaire that was administered during lectures and workshops to managers all over the world. The respondents were asked to indicate how well their organization performed on the various HPO characteristics on a scale of 1 (very poor) to 10 (excellent) and how its organizational results compared with its peer group. This subjective measure of organizational performance is an accepted indicator of real performance [17–19]. The questionnaire yielded 2015 responses from 1470 organizations. The factor analysis yielded 35 characteristics with both a significant and a strong correlation with organizational performance. These were divided into five categories, with the factor scales showing acceptable reliability [20] with Cronbach alpha values above 0.7.

The five HPO factors are:

1.  Management quality: Belief and trust in others and fair treatment are encouraged in an HPO. Managers are trustworthy; live with integrity; show commitment, enthusiasm, and respect; have a decisive, action-focused decision-making style. Management holds people accountable for their results by maintaining clear accountability for performance. Values and strategy are communicated throughout the organization, so everyone knows and embraces these.

2.  Openness and action orientation: An HPO has an open culture, which means that management values the opinions of employees and involves them in important organizational processes. Making mistakes is allowed and is regarded as an opportunity to learn. Employees spend a lot of time on dialogue, knowledge exchange, and learning to develop new ideas aimed at increasing their performance and making the organization performance-driven. Managers are personally involved in experimenting, thereby fostering an environment of change in the organization.

3.  Long-term orientation: An HPO grows through partnerships with suppliers and customers, so long-term commitment is extended to all stakeholders. Vacancies are filled by high-potential internal candidates first, and people are encouraged to become leaders. An HPO creates a safe and secure workplace (both physically and mentally) and dismisses employees only as a last resort.

4.　Continuous improvement and renewal: An HPO compensates for dying strategies by renewing them and making them unique. The organization continuously improves, simplifies, and aligns its processes, and innovates its products and services, creating new sources of competitive advantage to respond to market developments. Furthermore, the HPO manages its competencies efficiently and outsources noncore competencies.

5.　Employee quality: An HPO assembles and recruits a diverse and complementary management team and workforce with maximum work flexibility. Workers are trained to be resilient and flexible. They are encouraged to develop their skills to accomplish extraordinary results and are held responsible for their performance. As a result, creativity increases, leading to better results.

HPO research shows that there is a direct and positive correlation between the five HPO factors and competitive performance: the higher the scores on the HPO factors (HPO scores), the better the results of the organization; the lower the HPO scores, the lower the organization's competitive performance (see, for instance, the research results mentioned in [15,21,22]). An organization can evaluate its HPO status by having its managers and employees fill in the HPO questionnaire, which consists of questions based on the 35 HPO characteristics, and then calculating the average scores for the HPO factors (possible answers range from 1 for very poor to 10 for excellent). The average scores will reveal the areas in which the organization must take action to improve in order to become an HPO.

### 2.2. Evaluating How Future-Proof the HPO Framework Is

As stated in the introduction, the HPO literature, by definition, is backward-looking as researchers can only look at what organizations have done to become high-performing. The question thus remains: do the characteristics that made up an HPO in the past also make up the HPO of the future? [23]. To address this question, de Waal [24] undertook research using a descriptive literature review to investigate whether the factors that create excellence, as found in the literature, are constant over time, i.e., have been valid in the past decades and therefore may be assumed to be predictive for the future [25]. In this way, de Waal wanted to get a sense of the longitudinal relevance of the characteristics in his HPO Framework. De Waal did this by comparing research studies into excellence conducted before and after 1995 to evaluate whether factors of excellence stayed the same over time (see [16]). For this, the 290 studies studied in the literature review mentioned in the previous section were divided into two groups: studies performed in or before 1995 and studies conducted after 1995. For the characteristics found in each group, the weighted importance (i.e., the number of times it was mentioned in the literature sources in this group) was calculated for each group. The characteristics that scored at least a 6% weighted importance were deemed to be the most important for creating and sustaining HPOs in that group. The results of the calculations of the groups were then compared. This comparison showed there was coverage of 89%: almost 90% of the characteristics found in the studies done in/before 1995 could also be found in the studies performed after 1995. Although the attention given to certain characteristics may have shifted from time to time, overall, the characteristics found in both periods do seem to qualify as "evergreens of excellence," i.e., characteristics that are always important for creating and maintaining an HPO and that managers should always take into account when devising actions to lead their organization to excellence and superior results. Therefore, even though "results achieved in the past are no guarantee for future performance," the results of the comparison provide a strong indication that the characteristics that were found in studies conducted both before and after 1995 are important over time and therefore will be relevant, in one form or another, for the future. We, therefore, can answer the following research sub-question with confidence: "What are the characteristics of future HPOs?" by taking the characteristics in the HPO Framework as our base for answering our initial research question.

A further substantiation for using the characteristics of the HPO Framework as the base for our research, while at the same time getting a direction for our research, comes from looking at how different generations of employees in an organization look at and deal with the HPO Framework. This was studied by de Waal et al. [26] at a Dutch multinational with a management trainee program.

In this program, young talents, all belonging to Generation Y, followed a series of internships in various business units. A questionnaire on HPO was distributed among the trainees and their direct managers (all Generation Xers). The average scores for the five factors described in the HPO Framework were calculated for both groups. In addition, attention points were identified for the multinational, i.e., issues that needed to be addressed by the organization for it to become an HPO. The scores and the attention points were then discussed in a workshop with both the trainees and the managers. The research results showed that there was a close match between the opinions of the trainees (Generation Yers) and of the managers (Generation Xers) concerning the general importance of the HPO Framework and how they rated their company on the HPO factors. There were also no substantial differences between the two groups regarding the ideas and actions proposed to address and improve the HPO attention points. The only difference found between the generations was in the methods and tools that the two groups wanted to use to execute the improvement actions: the trainees were inclined to use social media for this more often than the managers did. We can conclude from this research that the manner in which HPOs strengthen the HPO characteristics (the "how") may and will vary over time. Our research should, therefore, first focus on identifying which HPO characteristics will be affected by the disruptor, and second, identify how HPOs can deal with these disruptions to those particular HPO characteristics.

## 3. Literature Review of Megatrends and Disruptors

### 3.1. Literature Review Approach

In this section, the results of our first study phase are summarized [3]. In this phase, we conducted a descriptive literature review to identify the megatrends and disruptors that researchers predicted will potentially become important for organizations to deal with in their workplace in the (near) future. We used a descriptive review as this type of review focuses on discerning an interpretable pattern from the existent literature, while it does not aim to contribute to theory-making as its goal was to map and classify prior research findings. The outcome of the descriptive review aimed to be representative of the current state of a research domain. The descriptive review covered many studies that were directly or indirectly related to the research topic and summarized the information about results obtained by the researchers. It then applied some form of quantification, in our case by counting the number of times the megatrends and disruptors were mentioned in the reviewed literature. We used the content analysis technique, in the form of the SLIP technique (sort, label, integrate, prioritize), to process the collected articles as this is a good method for analyzing academic and managerial texts and articles and to sort the results found or elaborated on by other authors. In our descriptive review, a search of various academic databases (EBSCO, Emerald, Google Scholar) was performed using (a combination of) the keywords "Future of Work," "Megatrends," "Disruptors," and "4th Industrial Revolution." To be sure to focus on the latest insights to ensure that the findings in these studies were relevant to our research, we narrowed the scope of our search to the period 2010–2019. As this initial literature review did not yield many megatrends and disruptors, we decided to also search for them in the managerial literature.

### 3.2. Literature Review Results

Ultimately, we were able to identify thirteen megatrends and one disruptor and the impact they will (potentially) have on organizations. The megatrends and disruptor are described below (the descriptions have been summarized from [3]), while their impacts on HPOs is discussed in the next section.

- Megatrend 1 [M1]: Speed of technological advancement. Technological advancement is the collective denomination for the progress of technological and digital tools, such as automation, big data, and advanced analytics, which increase productivity and provide better access to information and ideas. Organizations have been automating work for decades but it is specifically

the increasing speed of change in the technological field that makes technological advancement so disruptive, according to the extant literature.

- Megatrend 2 [M2]: Flexible employment. Flexible employment refers to an increasing variety in working arrangements and work practices, varying in the amount of working time, working locations, amount and types of work contracts, and employment contract forms. It is expected that traditional nine-to-five jobs will change in favor of mobile and on-demand employment, and that due to mobile technology and the internet, employees do not need to work in the same location anymore. There will also be a rise in "fluid" positions and jobs where people will have multiple roles within one organization or sign on as independent contractors. A gig-economy will appear that can be described as a labor market in which temporary positions are common and organizations have contracts with independent workers for short-term engagements rather than long-term employment contracts.

- Megatrend 3 [M3]: Skills mismatch. Skills mismatch refers to the expected gap in skills of the existing/current workforce and the skills that will be needed for jobs in the future workplace. Learning new skills to adapt to the changing work environment is not a new phenomenon, but with the increasing speed of change, it is a challenge to prepare organizations, employees, and educational systems in time for these changes. In addition, it is becoming increasingly difficult to assess what changes are needed and exactly what new skills are required as a result of these changes.

- Megatrend 4 [M4]: Sustainable employment. Sustainable employment refers to the extent to which workers are willing and able to remain working now and in the future. It is about offering work and working conditions that keep workers happy, healthy, and motivated. There is a rising interest and concern around sustainable employment among management, as in many (Western) countries, there is an imminent worker shortage because of the aging of the worker population, coupled with growing awareness for sustainability in general among the population (and thus the clients of the organization).

- Megatrend 5 [M5]: Continued globalization. Globalization is the process by which businesses or other organizations develop international influence or start operating on an international scale; in other words, the growing interaction and integration among people, companies, and governments worldwide. Globalization is not new, but nowadays it is mentioned in the same sentence with the megatrends "technical advancement" and "flexible employment." In light of the 2020 coronavirus disease (COVID-19) pandemic situation, which creates global issues in production and logistics, we also see an upcoming trend of deglobalization, especially for critical products, where countries want to start producing these products inhouse.

- Megatrend 6 [M6]: Changing workforce composition. By considering the changing workforce composition as a future of work disruptor, both the aging of the worldwide population and the generation shifts are addressed. Older employees are not only a growing proportion of the workplace but they also work longer. Next to the aging of the world population, the generation shifts from baby boomers (generation X, 1960s–1970s) to millennials (generation Y, 1980s–1990s), followed by generation Z (1990s–2010s) and generation A (2010s and onwards) coming up, will cause major changes to the composition of the workforce, since by 2025, millennials will make up the majority of the workforce.

- Megatrend 7 [M7]: Increasing inequality. There is a growing concern about the increasing wage and income inequality. Although employment rates have gone up from a global perspective, there are several groups of workers that are not benefiting equally, and their situation seems to be deteriorating. In particular, low-skilled employees, employees with jobs that are likely to disappear due to automation, self-employed employees (gig-workers), and employees with a migrant background are at risk; in addition, the gender gap (which also creates differences in pay between workers) is not expected to disappear in the near future. Thus, there is an increasing

need for social protection of vulnerable employees, with measures ranging from legal protection in flexible working arrangements to the introduction of a universal income.

- Megatrend 8 [M8]: Environmental issues. This megatrend refers to changes in the world's climate, caused by human activity, and its consequences. Flooding, the rise of the sea level, extreme weather conditions, and natural disasters caused by climate change result in major infringements on daily life. These environmental issues are expected to have a huge negative impact on future economic growth because much investment must be made available for reducing the ecological footprint of people and businesses, fostering sustainability and protecting the environment, and dealing with the expected migration of people from countries that are at risk of sea level rises and flooding.

- Megatrend 9 [M9]: Economic power shifts. By economic power shifts, we refer to the shift in economic power from the traditional West to the upcoming East. Countries in Asia, such as China and India, are becoming economically larger and more important globally because consumption in these countries and neighboring developing countries is increasing. This has an impact on the competitive position of organizations in the developed countries, making them more vulnerable to competitors but at the same time, creating opportunities for growth in Asian countries.

- Megatrend 10 [M10]: Urbanization. With the megatrend urbanization, we refer to the worldwide population shift from rural to urban areas, as a consequence of which an increasing number of people become permanently concentrated in relatively small areas (cities or metropolitan areas). This has an impact on organizations in rural and urban areas. In rural areas, there may be a drain in qualified workers, leading to organizational bottlenecks, while urban areas are becoming too crowded, leading to higher cost of living, increasing competition for jobs, and a more hectic/less balanced life, and as a consequence of that, health issues.

- Megatrend 11 [M11]: Cross-border migration. Cross-border migration refers to the migration of employees to another country with the aim of finding (better) work. Cross-border migration has been a natural consequence of a world in which people do not find attractive work opportunities in their country of origin, at a time in which other economies are not adequately filling their skills gaps. Cross-border migration changes the workforce composition and can create social issues. In addition, cross-border migrants are more vulnerable than native employees and have a higher unemployment rate, especially when they have a non-Western background.

- Megatrend 12 [M12]: Resource scarcity. Resources scarcity refers to the aggravating problem of increasing demand in resources, such as water, food, energy, land, and minerals, which is causing a scarcity in natural resources and inherent cost increases. Organizations increasingly need to address and reconsider their dependency on raw materials and resources. Finding new ways of working through innovation and the use of alternative resources will be key for them to survive in the future. Furthermore, even if leaders are not responding to this issue out of intrinsic motivation, society will force them to minimize their organizations' negative impacts on society and the environment.

- Megatrend 13 [M13]: Individualism. Individualism is the trend to distinguish oneself from another, which is causing a shift from a collectivist society to a focus on the individual. People and organizations are increasingly expected to offer tailored and personalized products, services, and solutions. Organizations need to address the increasing demand for individual attention. Client experience and employee experience have become key performance indicators that need close monitoring. Corporate training and mentoring approaches are becoming more bespoke to individual career ambitions.

- Disruptor 1 [D1]: Pandemics. The disruptor "pandemics" refers to the worldwide spread of infectious diseases. Notable pandemics include the 1918 Spanish flu, HIV/AIDS, and currently, COVID-19. Although pandemics did not appear as a megatrend nor a disruptor in the future of work literature, the recent COVID-19 outbreak shows that pandemics do have a great and pervasive impact on societies and organizations, and thus should be paid much more attention

to. Working from home, social distancing, increased illness, and mortality within the workforce, as well as the subsequent economic crisis, are just a few examples of how a pandemic impacts organizations globally.

## 4. Impact of Megatrends and Disruptor on the HPO Characteristics

To evaluate how the megatrends and disruptor can impact the HPO Framework, we constructed a matrix in which we combined the megatrends and disruptor with the characteristics of the HPO Framework. For each of the thirteen megatrends and one disruptor, we analyzed whether and how they could impact each of the five HPO factors and its underlying characteristics. This approach resembles the strategic foresight method of the future wheel, where the futurist puts the megatrend or disruptor in the center and thinks of possible direct consequences of that megatrend/disruptor [27]. The detailed matrix is given in the Supplementary Materials. This matrix shows that the HPO factors can be affected in both a positive and/or a negative way by the megatrends; they are mostly negatively affected by the disruptor. In other words, some megatrends create opportunities, while other megatrends and the disruptor constitute threats to HPOs. Below, we have summarized these opportunities and threats for each HPO, with b etween brackets signifying the megatrend (M) or disruptor (D) in question.

### 4.1. Management Quality

- Opportunities: New technologies can enhance the effectiveness of management when it comes to the speed of decision-making and action-taking if management acts as a role model, adopts "tech-savvy" behavior, and implements tech solutions in a safe and secure way, together with workers (M1). The general trend of sustainable employment practices may strengthen the perceived trust and integrity of management (M4).
- Threats: New technologies can become a threat to management quality if management is not tech-savvy enough and does not deal adequately with trust and security issues (data integrity, information credibility) (M1). Skills mismatch and increasing flexible employment can hit the management population, threatening overall management quality and stability (M2, M3). Management will have to put more effort into staying in contact with an increasing group of flex workers (M2) and employees who work all around the globe (M5), and into managing a workforce that might not have the right skills and qualifications to do the work required (M3) and might have different needs, wishes, and views (M6, M13). Furthermore, management needs to take sustainable employment conditions (M4) and climate change consequences (M8) into consideration more, and also make sure all workers have equal opportunities (M7) and get the same amount of tailored coaching/attention (M9). Management also has to spend much more time dealing with resources scarcities (M12) and combating the effects of the pandemic (D1).

### 4.2. Openness and Action Orientation

- Opportunities: New technologies will help to improve communication, dialogue, and knowledge-sharing processes greatly, which will contribute to openness and action orientation (M1); furthermore, globalization creates opportunities to widen the knowledge base through globally dispersed employees (M5).
- Threats: It will be more difficult to connect, involve, and engage with the increasingly large group of flex workers involved with the organization, with other workers, and among themselves. Mistakes may be covered up or harder to detect because the work is less oversee-able (M2). The organization has to make sure that there is even more/faster knowledge exchange to compensate for the missing skills of employees (M3). Communication and dialogue might become more difficult as management needs to take into account the different needs, skills, and outlooks of specific groups of employees (M6, M13), while at the same time, making sure that vulnerable groups are not excluded from these processes (M7). Environmental issues, resource scarcity, and the pandemic will take up significant dialogue time and process improvement

capacity (M8, M12, D1). Furthermore, different cultures of people make communication, dialogue, knowledge exchange, and being performance-driven more difficult, as they potentially do not understand each other enough (M9). Action orientation itself can become an end instead of a means, leading to the implementation of buzz/hypes, such as "agile ways of working," without taking time to oversee the original objectives of projects and actions.

### 4.3. Long-Term Orientation

- Opportunities: Technological advancement can be beneficial to customers because it will make it possible for the organization to serve its customers in better ways, provided that the organization deals with data and security in an honest manner (M1); a sustainable employment environment that also considers the climate will attract and retain stakeholders and employees that consider this to be important (M4, M8). Furthermore, although out of necessity, the organization has to create closer ties with stakeholders during times of scarcity (M12) and disruption (D1).

- Threats: With the fast-changing technical environment, it will become difficult to foresee which actions will lead to a sustainable future (M1), where flexible employment is, by definition, not secure and also not a good breeding ground for new management (M2, M3). An increasing global playfield makes it more difficult to maintain good relationships with many different types of stakeholders and customers (M5). Younger generations tend to have shorter tenures, which impedes long-term orientation (including promotions from within the organization); therefore, the organization has to do additional things to stay attractive to these generations and to cultivate a long-term orientation (culture) (M6). The organization has to protect vulnerable (migrant) worker groups to minimize employee turnover and maximize performance (M7, M9), and the organization has to change its ways of service delivery because there will be more (and possibly different types of) stakeholders that appear because of urbanization (M10).

### 4.4. Continuous Improvement and Renewal

- Opportunities: New technologies have the potential to improve business processes greatly and can potentially provide an organization with a uniqueness advantage (M1). Climate change will enforce sustainable innovation and renewal (M8)

- Threats: Implementing new technologies can become an end in itself in renewal projects without overseeing their impact (M1). With the increasing number of flexible workers, it will become more difficult to involve workers in improvement processes since it may not be seen as sensible to include them because of their temporary nature, they might be harder to reach communicatively, or they have already left (M2). Shorter tenures may impact team effectiveness, as it takes some time to get to know each other and form effective teams (M2), while at the same time, improvement will be difficult to achieve anyhow with people who are missing the right skills (M3). Furthermore, to stay relevant and competitive in a globalized marketplace, an organization has to find a unique strategy and support this with the best processes that will not impact the climate negatively (M5, M8). The strategy and processes will be affected considerably by increased urbanization (M10), the shift to the East (M9), and certainly during times of scarce resources (M12) and pandemics (D1).

### 4.5. Employee Quality

- Opportunities: New technologies can reduce or delete heavy or routine tasks, which makes work in the future more interesting and sustainable for employees. It also enhances learning possibilities, leading to a higher qualified workforce (M1). Globalization (M5) and cross-border migration (M9) widen the talent base that is available for an organization leading to a more diverse and qualified workforce. The sustainable employment trend will lead to a more engaged and sustainable workforce (M4), and having corporate social responsibility (CSR) policies will attract employees and flex workers that are motivated and engaged for this type of organization (M8).

■ Threats: New technologies (M1) will cause fear, stress, and illness among workers who do not believe they can keep up with the changes. The reduction of routine work (a bigger proportion of the work needs cognitive attention rather than physical activity), and the constant interruption and switching between tasks are expected to lead to an increasing number of burn-outs in the near future. An increase in flex workers, who as a group, potentially receive less management attention, might lead to a less engaged workforce with lower quality and motivation (M2), while older employees (M6) and workers with special needs (M7), in contrast, require more attention from management and also new ways and processes to accommodate them, with the latter also being true for the increased diversity in the workforce because of globalization (M5), cross-border migration (M9), urbanization (M10), and individualism (M13). Meanwhile, a workforce that misses the right skills will achieve fewer results (M3), and at the same time, more skilled and adaptable employees are needed to deal with the pandemic (D1).

## 5. Future-Proofing HPOs

In this section, we discuss how HPOs can prepare themselves according to the literature on the future of work and its opportunities and threats.

### 5.1. Research Approach

As our initial search during the descriptive literature review on the impact of megatrends and disruptors on organizations yielded few results, we were curious to see whether a search with different keywords would lead to more academic insights. Therefore, we made a search of various academic databases using (a combination of) the following keywords: "Future of work," "Megatrends," "Disruptors," and "4th industrial revolution," in combination with "High Performance Organization" and "HPO." These combinations led to a disappointingly low number of relevant results. We decided to try a different approach, combining keywords, such as "future of work" and "4th industrial revolution" with "ready," "solutions," "opportunities and threats," collecting the first fifteen search results for each of these combinations. After deduplication and deleting irrelevant search results, this approach yielded a list of fifty sources, mainly discussing technological advancements from a variety of perspectives, such as geography or industry. We did not find holistic literature on the future of work that combined and discussed all megatrends and disruptors and placed them in the context of a high-performance organization. We then decided to look for future-of-work solutions for each of the individual HPO characteristics. We searched for relevant academic literature by combining the keywords "future of work" or "4th Industrial revolution" with "Management quality," "Openness and action orientation," "Long-term orientation," "Continuous improvement and renewal," and "Employee quality." The results from this search were rather fragmented and we did not find any new solutions, models, or approaches that specifically dealt with the expected megatrends and disruptor concerning the future of work, and certainly not in a holistic manner. We discuss the most frequently mentioned courses of action below.

### 5.2. Research Results

Regarding management quality, many sources state that it is essential that the management skills of the future will be different from those of today, but basically no "new" skills were mentioned, other than the ones that have been discussed already many times in the literature of the past decade [28–30]. The one future skill that was mentioned most was "tech-savviness" as being indispensable for top management in the (near) future [31,32]. Regarding openness and action-orientation, the literature seems to be in agreement that organizations should adopt more open and flexible organization structures, while also striving for agile ways of working, collaboration with stakeholders/partners in the production chain, implementing intelligent manufacturing modes, and adopting open innovation, which in general, will benefit the other HPO factors also [31–35]. As for long-term orientation, the role of values, purpose, and corporate culture are mentioned as being essential for future high performance. Specifically, being purpose-driven is mentioned often, especially in the management literature [36–38].

Regarding continuous innovation and renewal, several sources discuss very specific solutions, such as introducing lean six sigma competencies for data scientists to lead Industry 4.0 implementations. Other sources more generally explain that organizations should invest more in R&D or incorporate an organization-learning goal orientation [39–41]. When it comes to employee quality, the solutions mentioned are reskilling and more attention to sustainable employment conditions. Managers need to enhance staff training and help them improve their capabilities so they can cooperate in their job and work with new technologies (robots, artificial intelligence). Closing the skills mismatch gap and addressing soft and technical skills is mentioned as key success factors and should have priority; however, how to do this depends on the organization and should be a bespoke approach. In addition, organizations must reform and adapt to become an efficient, flexible, and humanized working atmosphere to create optimal work and work conditions. Quality of life, meaningful work, vitality, employee experience, and opportunities for development are just a few terms that appear quite often in the literature. This will require a transformation of the human resources' (HR) function to meet the changing circumstances. Focusing on employee vitality and sustainable working conditions are also mentioned as a solution for the changing workforce composition, which includes the older workforce [41–43].

## 6. Summary, Limitations, and Future Research

The study described in this article is the second step toward answering our research question: How should HPOs address megatrends and disruptors in such a way that they can secure sustainable performance? Based on the megatrends and the disruptor identified during the first phase of our study [3], in the second phase of our research we identified the impact of the megatrends and disruptor on HPOs using the previously developed HPO Framework [6,16]. Our study revealed that the megatrends and the disruptors are mainly expected to be threats to the survival and wellbeing of an organization and its people. Some of the megatrends, however, do offer opportunities to organizations, with the (speed of) technological advancement being the foremost in this respect. The way an organization deals with technology can lead to strong positive or negative impacts on performance; therefore, there is no doubt that organizations need to create "tech awareness" and ensure that the right skills are available to deal with this megatrend. The increase in flexible employment arrangements is also affecting all HPO characteristics; however, more in a threatening way. Another big opportunity comes from the sustainable employment ("decent work") trend, which can be a solution for organizations that want to attract and retain qualified management and employees, and at the same time, serve society in a sustainable way. Since all decisions and investments start at the top of the organization, it is essential that supervisory boards and management teams take notice of the megatrends and disruptor and their impact before it is too late to act. As research shows that organizations are more inclined to act on future threats than opportunities, a specific call must be made to management to consider opportunities, such as sustainable employment, skilling programs, and using the wider global talent base.

A rather disappointing result of our research was that current literature basically does not offer innovative solutions and ways to deal with either the threats or the opportunities offered by the identified megatrends and disruptor. The results from our search into this area were fragmented and we did not find any new solutions, models, or approaches that were specifically dealing with the expected megatrends and disruptors concerning the future of work, and certainly not in a holistic manner. We did list solutions from the "fragmented" academic literature in the areas of technology-awareness, adoption of tech solutions, reskilling of management and employees, organization restructuring, and sustainable employment practice. But we sincerely doubt whether these solutions are innovative or radical enough for organizations, let alone HPOs, to prepare themselves for the future in a systematic and adequate way. We are of the opinion that business leaders could benefit from a holistic model or systemic approach that places megatrends and disruptor in the organization's context, making use of strategic foresight methodologies, such as the future wheel or scenario thinking. Future research

could therefore focus on the development of such a model. More work also needs to be done to identify moderating variables, such as the industry, geography, and size of an organization, as each organization needs to be analyzed in its own context and environment.

There are several limitations to our study. First, we used the thirteen megatrends and one disruptor from our earlier research. It is possible that in the meantime, other megatrends and disruptors have emerged or have become more important (as illustrated by the sudden appearance of the coronavirus). Furthermore, although we made a comprehensive search for holistic literature, it is possible that we have missed sources that contain other holistic solutions. Future research should check whether changes in or additions to the megatrends and disruptor(s) have taken place. Another limitation may come from the HPO Framework, which was chosen as the analysis model to identify opportunities and threats for HPOs. It is possible that other business frameworks would have led to different findings and conclusions. We, therefore, hope that future researchers might replicate our study with different analysis models, and compare their findings with ours. Finally, an important avenue of future research is verifying whether the courses of action as described in this article (and detailed in the Supplementary Materials) can be proven in practice. As we are dealing with the future, this is near impossible. However, the courses of action could be checked in terms of their reality level, i.e., how feasible and probable they are. We are planning to do this by discussing the courses of action with management teams of various organizations, asking them how "good," practical, and feasible the courses of actions are and whether they would use them in the future. Alternatively, we could (also) use Delphi research, in which we discuss the courses of action with experts in the field to come to a consensus on the courses; or a survey, in which we ask a large number of respondents to score the courses of actions on feasibility (thus making statistical processing possible). Undoubtedly, we will report back on our findings of this last part of our megatrends/disruptors research.

**Supplementary Materials:** The following are available online at http://www.mdpi.com/2071-1050/12/20/8507/s1. Table S1: Effects of the megatrends and disruptor on the HPO characteristics.

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