PINK - grammar/style could be improved
ORANGE - I have made comments below the section

Employee Health: BizzVit

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1. Problem Description

Over the last two decades, there has been a continuous rise in mental health and substance abuse disorders globally (Ritchie and Roser, 2018). Moreover, obesity rates have nearly tripled between 1975 and 2016 and are predicted to grow even further the next decade to come (Haththotuwa, Wijeyaratne & Senarath, 2020). As problems with mental health and overweight became more prevalent and have been found to positively correlate with absenteeism among employees (Lehnert et al., 2014), such complications can result in substantial annual costs for businesses due to productivity losses (Xue, Kristiansen and de Blasio, 2010). Additionally, it has been proven that the well-being and happiness of employees are strongly related to their overall productivity (Oswald, Proto and Sgroi, 2015). Even though there are many corporate health interventions available on the market, such interventions can be very costly (Ribisl, Leeman, and Glasser, 2014). Furthermore, a scalable overarching software system to promote healthy behaviour in and outside of the workplace is still missing. Due to indirect effects of the corona crisis on employees' mental health and well-being, most companies are expecting more long-term absenteeism in 2021 than ever before.

* Your backdrop through research seems solid and also intuitive from the person's perspective - to be "happy", one needs to take care of their mental and physical health.
* It is a bit unclear to me how software would help to take care of the employees' health. Even if it is an overarching one.
* Maybe it is a good thing I can not imagine such software - I am ready for a surprise at a later chapter!

2. Target Market

Most companies are looking for ways to keep their employees vital, happy and productive. This is especially true given the case that working from home became the new norm and the COVID-19 pandemic has taken its toll on the general public's physical and mental well-being (Xiong et al., 2020). Instead of companies having to find new ways to motivate their employees, our aim is to offer a single solution that covers their whole vitality program within a software-based platform. To that extent, the target market will be companies that are in need for a vitality solution which is easily adoptable, promotes long-term healthy behaviour and is relatively affordable in comparison to costly temporary health interventions. More specifically speaking, the companies to which the solution is aimed at will be Small and Medium sized Enterprises (SMEs), as occupational health research and practices are often neglected among such companies despite the fact that they are the most common work setting in most economies (Martin, Sanderson, Scott, and Brough, 2009).

* Keeping someone vital, happy and productive sounds like someone is herding those employees. I would argue that people usually do not want to be "kept", they want to be "inspired" instead. So maybe rephrase this into "most companies are looking for ways to inspire their employees…"?
* Still interested in how a software-based platform would help companies and individuals to be inspired to take care of their health. Tension is building!

3. Product Idea

3.1 Product Description

To offer a solution to the described problem, we offer a business-to-business (B2B) platform that stimulates healthy behaviour for participating companies and incentivizes this among

employees. When a company is participating, they can use the platform to gain insights in the overall vitality of their employees and their workplace and will be enabled with the means to adjust to malfunctioning health aspects accordingly. Additionally, they can make use of the vitality options the platform offers for their employees such as easy and healthy recipes, fitness classes, setting step count and calorie goals and set integrations to other fitness, nutrition and mental health applications. When they are using the platform, they can compete with other companies in becoming the most healthy company within their industry, company size or region. The competition module will show an overview of all involved companies, which vitality options they offer and how they are doing on a vitality scale. In this way, companies will get motivated to stimulate their employees to be healthier.

The ranking of the competition will open for outsiders as well, as long as the participating companies consent to this. In that way, employees can see how their company is doing and feel proud and motivated to help in the competition. On top of that, future employees can become more excited about a company because their health ranking is good. By doing so, we strive to give people insights into what companies are really doing regarding vitality as it is hard to see from the outside but says a lot about how much a company cares about its employees.

Employees can earn points (Vitcoins) by performing physical and mental exercises and eating healthy. This can be done by walking or cycling to work, completing an exercise (in the application), taking enough breaks, telling how they are mentally doing in their work setting, visiting a gym, filling in healthy meals they eat, setting goals and achieving them and by integrating an application that they already use, like Strava or a smartwatch application. Because it is very understandable that an employee does not want to share their private data with their employer, their score is anonymous and only visible for themself. That means they can't compare their score with another individual, but they are still able to compare their score with the average of their team or the average of the company. This also means that managers in a company are not able to see the vitality scores of each individual, but they can see the team average and the company average as well.

The points that employees earn can be used by them to get discounts or even free products that help them become even more vital, for example sport equipment, gadgets, gym subscriptions and healthy food boxes.

* I like you are aiming for openness and integration with other well-known platforms.
* Earning specific coins brings a blow. There is a feeling that the system is not focused on helping me improve my health but to capture my attention and make me want to earn more coins. I understand what you want to do but I do not like idea of in-game currency, especially if it is tied to my mental health. Idea "Clickbait" comes to mind.
* I like how you inform managers with the scores to make them question their practices. "Is there something I can inspire my employees with" would be the question what they should ask. But it might fall the other way with "how can I make them earn more coins". Be careful how you formulate this so the software does not become another source of unhappiness.
* FInally, maybe you should start explaining the solution from the employee perspective - that's where all starts for the system, right? At the moment, it comes last.

3.2 Product Features

- Ranking lists of organization's scores on certain health aspects (publicly if their consent is given); relative scores in comparison to other companies (within the same industry, company size, etc. → e.g. "Your company is exercising more than 70% of all companies nationally and 90% of all Medium-sized software production companies").
- Dashboards showing scores on health subjects for different scopes (organisation wide, per department, per team, etc.). Subjects of the dashboards can differ from amount of healthy food that is consumed, average activity level of employees, amount of exercises done, average walks during the day, average length of breaks

(enough break time = good) and how employees are mentally experiencing their work.
- Curated list of intervention-suppliers based on the lowly scored health subjects. (Including costs, duration etc.) Afterwards, data can show whether the intervention has the desired result.
- Points system for employees. Health points can be earned by performing physical and mental exercises and eating healthy. This can be done by walking or cycling to work, completing an exercise (in the application), taking enough breaks, telling how they are mentally doing in their work setting, visiting a gym, filling in healthy meals they eat, setting goals and achieving them and by integrating an application that they already use, like Strava or a smartwatch application.
- Connection with smart devices like smart watches, cycling computers etc., sport applications like Strava and the Nike Run Club and other systems like check-ins at the gym.
- Extra points gained by stimulating others to score more health points. For example, planning group sessions via the app, organising or joining running groups, yoga classes etc.
- Prizes and (social) media attention can be earned by top scoring companies.
- Employees can use their points for rewards, like discounts on smart watches/fitbits, new smartphones/laptops, gym subscriptions, sport equipment etc.)

* To me, the point system does not seem like a good idea. It feels like it would defeat the purpose of having a wellness software. Through points, and stimulating others to gain more points, it becomes like a point-collecting game. Farmville/CandyCrush of sorts - the more you do a certain thing, the more you gain points. So it becomes a point hunt instead of a subjective tool to measure health. The points show which companies have better collectors and not higher health standards. I hope you see what I mean.

3.3 Benefits of product

Benefits for companies

- Improve employee vitality. Vital employees get sick less often, are more productive, feel more committed and are therefore an important factor in organisations' success (Noordzij, 2013).
- Improve overall health and well-being of employees
- Lower sick leave which leads to decreased sick leave costs.
- Increased productivity as a healthier lifestyle of employees will lead to a happier people that are happy to work as well.
- Data in application will give meaningful insights to improve the company. If for example employees mention they experience a high work pressure, the application can warn the manager so he or she can act accordingly by taking better care of the employees. This can prevent employees from giving too much and getting into a burn out.
- Our platform is fiscally advantageous as employers can offer it as untaxed compensation because of the “werkkostenregeling”.
- It is a great fringe benefit to offer a vitality plan and it is therefore a good selling point to attract new talent to your company
- A high ranking on employee health is positive advertisement for a company
- Data can be used to check if vitality projects help or not by checking the engagement and activity of employees.

* How does increased productivity connect to happy employees? I would say this has to be the other way around. Happier employees will increase the productivity.
* Employees should not be stopped from “giving too much”. You should not stop an employee who works on a problem that they enjoy. It is again the other way around - you should stop companies from asking too much of the employees, especially meaningless and recurring tasks that suck to do. Word it that way.
* Yes - having a vitality plan is indeed very attractive for talent. But think about if the plan which you need to collect points for is such a plan. Does it actually promote vitality or require you to go running for points so that the team looks better on the graph?

Benefits for employees

- Become happier and/or stay happy.

- Become fitter and healthier.
- Receive discount and rewards with earned points.
- Motivation for living healthier and improving health with the application.
- Anonymously sharing your work experience

4. Technology

4.1 Data streams

The collection and processing of user health and activity data is crucial for the system to work. Without proper data little analysis can be done and therefore managers would not be able to intervene and monitor employee health. Also, the health and activity data will determine the amount of points a user will receive.

To collect the physical activity data the system will connect with other fitness and health services. As a start, the system will focus on four popular fitness tracker services and collect the data through their APIs. These services are Google Fit[1], Apple Health[2], Fitbit[3] and Strava[4]. Users of our system will be able to connect the application to the service that they use for their physical activity tracking. Our system will then log and process new activities and award the user with points based on how well they performed in their activity.

Other health data, like nutrition and mental health are more difficult to track. For this data we will rely on self reporting by users. Users will be able to fill in whether their meal was healthy or not, and what their mood was throughout the workday.

In order to retain the anonymity of the data that is collected, users will only be able to view their own activity. Also, managers will only be able to view aggregated data and view averages for activity. However, the point system will be available publicly within an organization as this should create competition between co-workers.

In order to handle and process the incoming data we will be creating our own backend API using the popular PHP framework Laravel[5]. Laravel is a web application framework with a large ecosystem[6] of plugins that can be used to quickly develop an API for any application.

The system will also use a SQL database as most of the data in the system is relational. For example, a user belongs to an organization, or a new logged activity belongs to a user. More specifically, the system will use a PostgreSQL[7] database as it is able to manage large datasets, is free and open source, and can easily be extended.

[1] https://developers.google.com/fit
[2] https://developer.apple.com/health-fitness/
[3] https://dev.fitbit.com/build/reference/web-api/
[4] https://developers.strava.com/
[5] https://laravel.com/
[6] https://ecosystem.laravel.io/
[7] https://www.postgresql.org/

4.2 User interfaces

Since the system will have two roles, a manager and employee, there need to be two different types of user interfaces. Firstly, the regular employee needs to access and view their own healthy and activity data. For them, a mobile application will be developed which they can easily access on their smartphones. Here, they can login on the system, connect through other health services and log their other health data. On the same app, they will be able to view their awarded points and compare their point score with co-workers. They will also be able to view and select possible rewards.

The managers need a larger overview of the aggregated health data. Based on this data they need to be able to select the best health intervention methods and monitor the wellbeing of their employees. Since a manager would need to view the data in more detail and more thoroughly, a dashboard needs to be developed. This dashboard will be accessible as a web application so the data overview can be viewed on a larger screen (desktop or laptop).

However, due to time constraints for developing an MVP, we will first mainly focus on a mobile application. For the first version, the data overview for managers will be accessed through this mobile application as well. This way we focus on creating a highly usable and great mobile application. A separate dashboard for managers can always be developed in a later stage of the product development.

Further, to increase the feasibility of an MVP the mobile application will be developed using the Flutter[8] framework. This is a cross platform framework that compiles native iOS and Android applications from a single codebase. This framework also offers many great pre-built widgets and UI components and has a growing community of developers. This will help us develop and deploy a native mobile application fast.

5. Current Market

In the current market, multiple business-to-consumers (B2C) platforms exist where individuals can track their health (e.g. Samsung Health, Apple Health, Google Fit, etc.). The gamification aspect where consumers can earn rewards by living more healthy has been introduced into the market by multiple Insurance companies worldwide, such as Vitality in the Netherlands, the UK and Thailand. B2B solutions exist where interventions, information and programmes are offered to businesses to boost their vitality. An example is the company Limeade and their platform named Limeade ONE, which consists of multiple solutions that can also be bought separately. These solutions are made to create an intentional employee experience that demonstrates care by reaching every employee, listening to them and offering activities, resources and programs. However, no B2B platform exists yet that incentivizes healthy behaviour of employees of participating companies by implementing gamification: tracking their activities and patterns in order to reward healthy behaviour and compete with other companies.

[8] https://flutter.dev/

6. Stories

To achieve a better understanding and elicit features and requirements for the system a list of jobs that the system should handle are created:

1. Help me improve and maintain the health of my employees and colleagues
2. Help me measure employee physical activity
3. Help me select interventions to improve the health of my employees
4. Help me win the competition between organizations regarding employee health
5. Help me improve my own health
6. Help me win prizes and rewards

* These two points sound like exactly what China is doing. Investigate a little bit but there is a personal social score for each person. This is used for granting visas, housing permits, loans etc. People are under constant observation and hate the government for it. I would propose you to think these stories around in a way that they are individual-centric. Even though you are B2B, the success of your business comes down to if the individual employee would use the system. Nobody can (thankfully) force a person to share their data in the EU, even not the employer.

Overall, I really like your idea and what you are going for. We are paying way too little attention on the employee health. Out of many companies and institutions I have worked for, very few have an answer to this dilemma - how to get the people moving and taking care of themselves. The benefits are clear but the motivation is not clearly found yet. If you can figure out why a person would sign up with you - you are in a sweet spot to go to the companies and really conquer the market. My suggestion would be to start looking from the question of the employee - “how can I improve my working environment through sharing my insights… how can I make sure that things will improve if I share my insights”.

Thanks for sharing your plan with me, I wish you good luck and a lot of strength. When we get off the ground with our own idea, we might want to use your services, too! ;)

7. References

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