Business Value

Happi Employi

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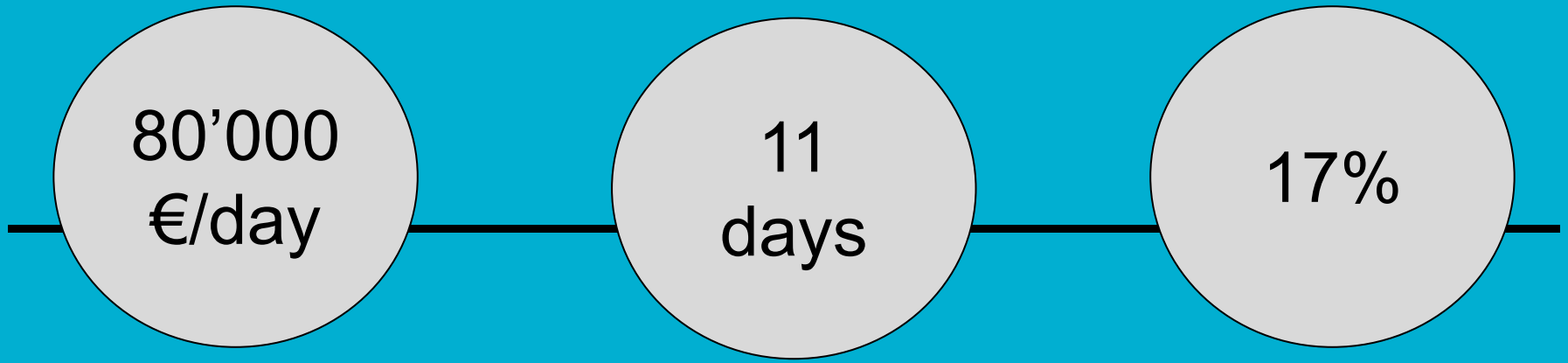
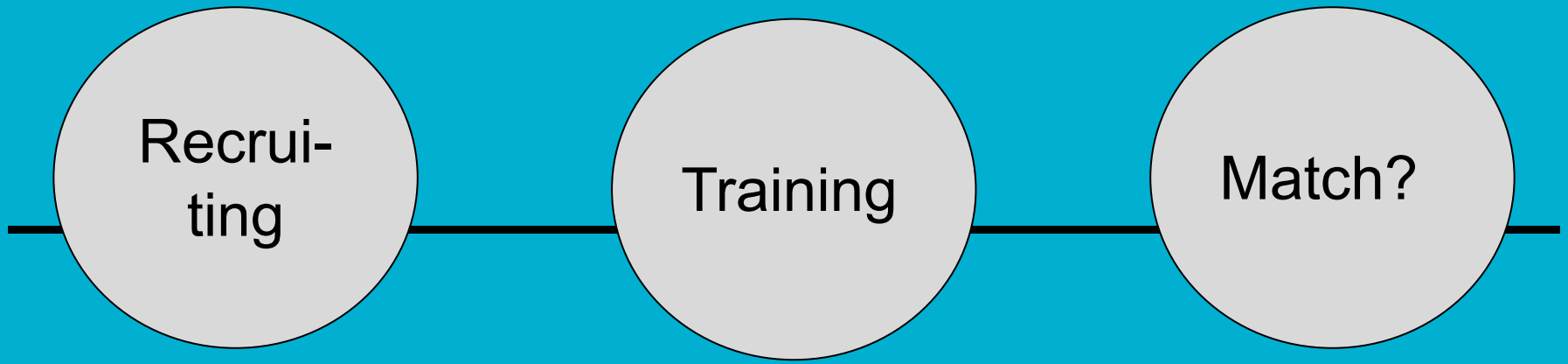
Agenda

- Introduction (Silke)
- Website (Teo)
- Market Analysis (Olena)
- Cash Flow Prediction (Silke)
- Business Model and Growth Strategy (Yussif)
- ML Canvas (Ilia)

Employees' Mental Health



Cost of New Hire



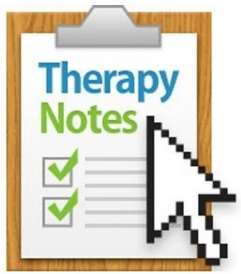
Website

HappiEmployi

Market Analysis

- Global Mental Health software market was worth 1.36 billion in 2020.
- It is expected to reach 2.6 billion by 2025.
- Our Market Analysis is based on the German market only.

Competition



braive
building healthy minds

simplepractice

psyomics™

MindDoc

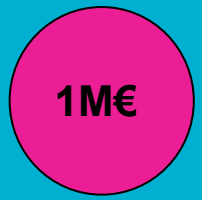
BlueCall

unmind

spill

betterhelp

Cash Flow Prediction, Year 1



Cash Flow Prediction, Year 2

Revenues from Happi Employi basic service

estimated SOM	Nr of customers / companies (acc. to x % SOM)	estimated revenue (basic service)	rounded estimated revenue
1%	940	940'000 €	1 Mil €
5%	4'700	4'700'000 €	5 Mil €
10%	9'400	9'400'000 €	10 Mil €

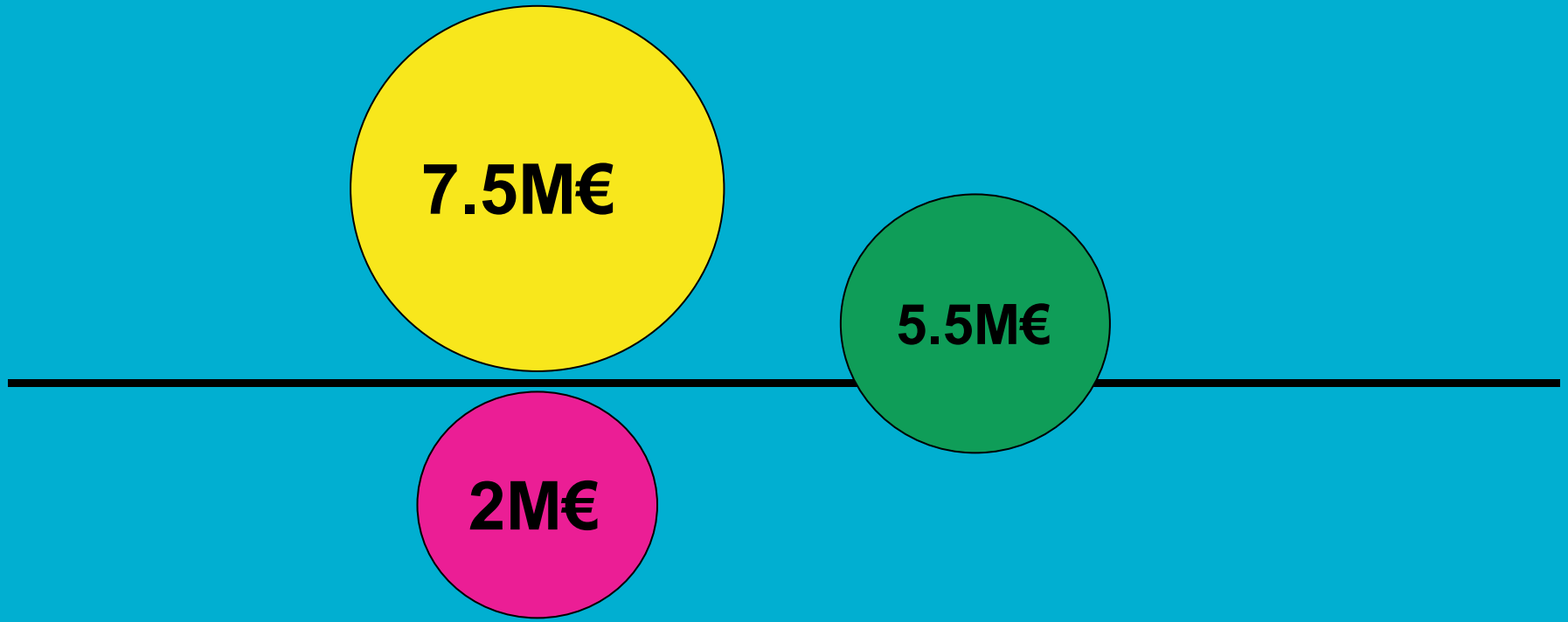
Table1: revenues basic service for estimated x% SOM

Revenues from email support

estimated SOM	Nr of customers / companies (acc. to x % SOM)	estimated revenue (support)	rounded estimated revenue
1%	940	528'750 €	0.5 Mil €
5%	4'700	2'643'750 €	2.5 Mil €
10%	9'400	5'287'500 €	5 Mil €

Table 3: revenues email support for estimated x% SOM

Cash Flow Prediction, Year 2



Business Model Canvas

Key Partners

- Psychological Counselling Services: Deliver psychological counselling to employees in need and smart matching system to find the best matching private counselor.

- Insurance Companies: both private and public
Federal Institute for Drugs and Medical Devices (BfArM)

Key Activities

Providing mental health software solutions to companies

Key Resources

- Technical Expertise (Data Scientists, DevOps, Web Developers...)
- Legal Team to develop NDAs, Contracts, and Term & Conditions
- Financist Affiliates
- Customer Support
- Subject Matter Expertise (Psychologist)
- Software (RStudio Connect, AWS)

Value Propositions

- Provide information if an employee experiences any mental issues which affect his/her performance

- Increase employee productivity via by solving mental health issues before it is too late

- Guaranteed Availability

Customer Relationships

- Customer acquisition

- Automated services combined with co-creation

Channels

- Company's Web Site (with option to create surveys, test the product and live chat)

- Social Media (Facebook and Linkedin Ads)

- SEM (Google Ads, Duckduckgo)

Customer Segments

- First: German MSE in IT

- Later: all MSE, Schools, Hospitals

Business Model Canvas

Cost Structure

- Combination of value-driven and cost-driven cost structures

- We created an expense model of fixed and variable costs.

Revenue Streams

- Mental health analysis questionnaire

- Email support

OSMI dataset based model

Original data: Categorical features [1259 x 27]

1. Data Preprocessing
2. Data Cleaning
3. Data Imputation
4. Feature Selection
5. Modeling
    a. Model choosing
    b. Hyperparameter Optimization
    c. Validation
    d. Testing

	Recall	Accuracy	Balanced Accuracy	Kappa
Random Forest	0.880	0.809	0.804	0.613

Machine Learning Canvas

Decisions	ML task	Value Propositions	Data Sources	Collecting Data
How are predictions used to make decisions that provide the proposed value to the end-user?	Input, output to predict, type of problem.	What are we trying to do for the end-user(s) of the predictive system? What objectives are we serving?	Which raw data sources can we use (internal and external)?	How do we get new data to learn from (inputs and outputs)?
Based on our output the employer suppose to take measures to help an employee or in extreme cases, take a discharge actions. **Also it is expected that we will be aware what measures will be taken afterward via by HR or deployed psychologist.**	**Input: categorical and text based on questionnaire and performance review** **Output: Is treatment required? (Yes/No)** **How severely is an employee damaged? (no stress, acute stress, episodic acute stress, and chronic stress)** **Type: Classification**	**1. Provide information if an employee experiences any mental issues which affect his/ her performance** **2. Increase employee productivity via by solving mental health issues before it is too late**	**1. internal: our data source is based on our questionnaire.** **2. external: OSMI database**	**During Performance Evaluation, every 6 month from a particular company**

Machine Learning Canvas

Making Predictions

When do we make predictions on new inputs? How long do we have to featurize a new input and make a prediction?

During Performance Assessment

Means of Internet Speed to provide a feedback (Instantly)

Offline Evaluation

Methods and metrics to evaluate the system before deployment.

Cross-Validation

ROC AUC,
Recall,
Balanced accuracy,
Kappa

Features

Input representations extracted from raw data sources.

+ Categorized answers: Yes/No and 1-10

+ One text answer (possibly): it will require a sentimental analysis

+ Standard Performance Assessment text answers

Building Models

When do we create/update models with new training data? How long do we have to featurize training inputs and create a model?

Every 3-6 months, depends on how many clients we have and when they do performance assessment, mostly it is expected during calm periods between assessments

It can take a few weeks and up to 6 months, strongly depends on the amount of data we are provided

Live Evaluation and Monitoring

Methods and metrics to evaluate system after deployment, and to quantify value creation.

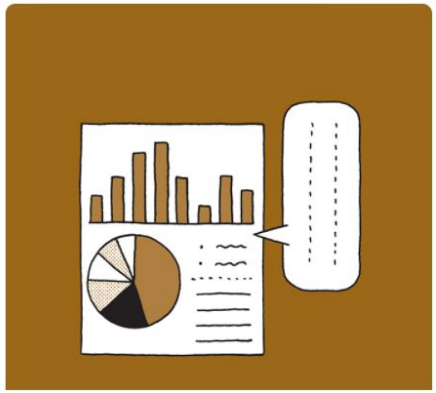
Dynamic assessment of an employee based on HR feedback:

If we take a certain employee and this person experiences mental health issues, we will notify about it an HR. Afterwards it is expected that the HR and the employee discuss it and will find a certain solution for that employee. HR will notify us about taken measures. And during the next assessment we will say determine if there is a better mental grade or not.

Key Business Models

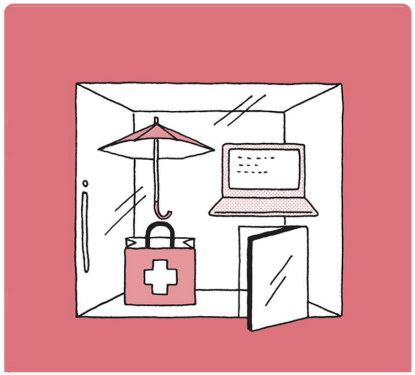
Freemium

- Attract the highest volume of customers possible
- Competitive advantage in terms of price (Easier to penetrate existing market)



Leverage Customer Data

- Improving the product and value through the data we collect
- The data itself provides us a competitive advantage



Solution Provider

-Offer total coverage of services in particular domain (HR Operating Systems)
- More data & Closer to the customer (even better product)

Growth Strategy

Developing Initial Product & Collecting Data

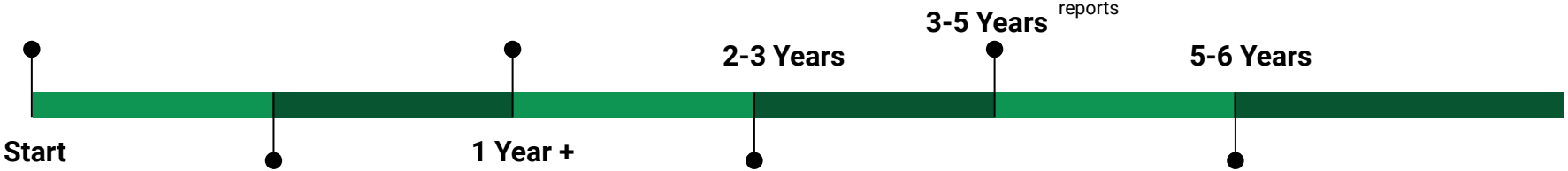
Performance Metric Tool in exchange of data. Here we will implement a Freebie and Leverage Customer Data Business Models.

Add Mental Health Feature to The Main Product

Now we are moving out from Freebie Business Model. At this step our product introduces far more value than competitors, thus allowing us to sell it.

Introduction To Medical Nische
:

- Introduce Our Model To Self-Assessment App
- Combine the model with NLP to analyze textual psychological reports



DevelopIng Mental Health Measurement Product (Model)

While collecting data we will use it to train and test our models. The freebie model allows us to collect as many customers as possible eventually resulting in a large volume of data for our model

Developing Affiliation Network & Creating New Brand to Reach New Markets

We will create a new brand with a specific focus on medical nische. After that we will present our new and modified products to the healthcare market under this brand.

Another growth vector is to start an Affiliation Programme with Mental Health Service Providers (Counselling and Therapy Services) and Mental “Fitness” Providers (e.g. Yoga).

Growth of Partner Network

Increase the Network of Partners:

- Become a part of DiGA - certify the app.
- Insurance Companies (cost savings due to early treatment)
- Hospitals (Charite, Vivantes, and more)

Thank you for your attention!

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Teodor Chiaburu