

Science framework of iThrive

May, 2018

We - iThrive - help people to thrive. Thriving people do well, are healthy and strong. Thriving can be scientifically defined as having a life satisfaction score of above 7.5 (on a scale 1 to 10) (<http://worldhappiness.report/>).

Research shows that thriving people are up to 21% more productive, have up to 41% fewer quality incidents at work and up to 37% lower sick leave (Harter et al, 2010; Gallup, 2012)^{1,2}

However, only 19% of the time people succeed in long-term positive behavior change on their own (Norcross & Vangarelli, 1989). There are many reasons what makes creating new habits so difficult, here a few to highlight the challenge:

- existing patterns have a huge advantage over new ones (the way our brain functions)
- new desired behavior not specific enough defined
- the individual lacks (Fogg, 2009):
 - motivation
 - ability
 - triggers
- even (unconscious) resistance or sabotage because it is 'forced' upon her and/or involves sacrificing some benefit compared to the existing situation
- not easy enough to do the new behavior
- relying too much on willpower
- requiring a big jump at once (instead of really small steps)
- not repeated often enough or maintained
- not (enough) personalized, utilizing the person's values, strengths, drives and perceptual preferences

iThrive has developed a digital behavior change training program supported by artificial intelligence (AI) technology to help people to thrive. Our training is built on an evidence based model, which has been clinically proven to be 5 times more successful in helping pre-diabetes patients to change their behavior (Chen et al, 2016; Sepah & Peters, 2015)^{3,4}. This model is beating the golden standard of clinical proven behavior change.

¹ Gallup Institute (2012), Engagement at Work: Its Effect on Performance Continues in Tough Economic Times; Gallup's [Q12 Meta-analysis](#) of 1.4 million employees

² Harter J.K., Schmidt F.L., Asplund J.W., Kilham E.A., Agrawal S. (2010). Causal Impact of Employee Work Perceptions on the Bottom Line of Organizations. *Perspectives on Psychological Science*. Vol 5, Issue 4, pp. 378 - 389

³ Sepah SC, Jiang L, Peters AL. Long-term outcomes of a web-based diabetes prevention program: 2-year results of a single-arm longitudinal study. *J Med Internet Res*. 2015;17(4):e92. doi: 10.2196/jmir.4052. Study funded by Omada Health. Results are based on study participants only; actual results may vary based on age, gender and other individual and demographic factors.

⁴ Chen F, Su W, Becker SH, Payne M, Castro Sweet CM, et al. (2016) Clinical and Economic Impact of a Digital, Remotely-Delivered Intensive Behavioral Counseling Program on Medicare Beneficiaries at Risk for Diabetes and Cardiovascular Disease. *PLOS ONE* 11(10): e0163627. <https://doi.org/10.1371/journal.pone.0163627>

iThrive's behavior change training contains the following elements:

1. Coaching - Jean, the AI chat bot on the smartphone
2. Peer support - Buddies
3. Tracking - self-reported
4. Program - workshops and webinars

The average time investment is about 15 minutes per day.

At the beginning of the training people go on a mini-hero's journey with Jean the chat bot on their smartphone to map out what's important to them, what's standing in their way and what they are really good at. Those 8 conversations take between 20 to 30 minutes.



After that, every 2 weeks people have coaching conversations with the chat bot that last about one hour. That's where the inner world gets in motion. At these coaching conversations the inner critics and counterproductive habits are challenged, embraced and integrated.

Everyday people do a check-in that takes between 3 to 5 minutes. The daily practice helps to build new & healthy habits and make behavior change long lasting. During the daily check-ins the people track their well being. They get to monitor their own and their team's wellbeing.

The organization received an anonymized monthly report of the well being of the various teams. Those reports provide insights to allow the organization to identify problems before things go really wrong. Those team well being reports become a benchmarking tool between the different teams. iThrive also offers tools to analyze the leadership styles in the different teams and help managers to engage with their staff in a different way.

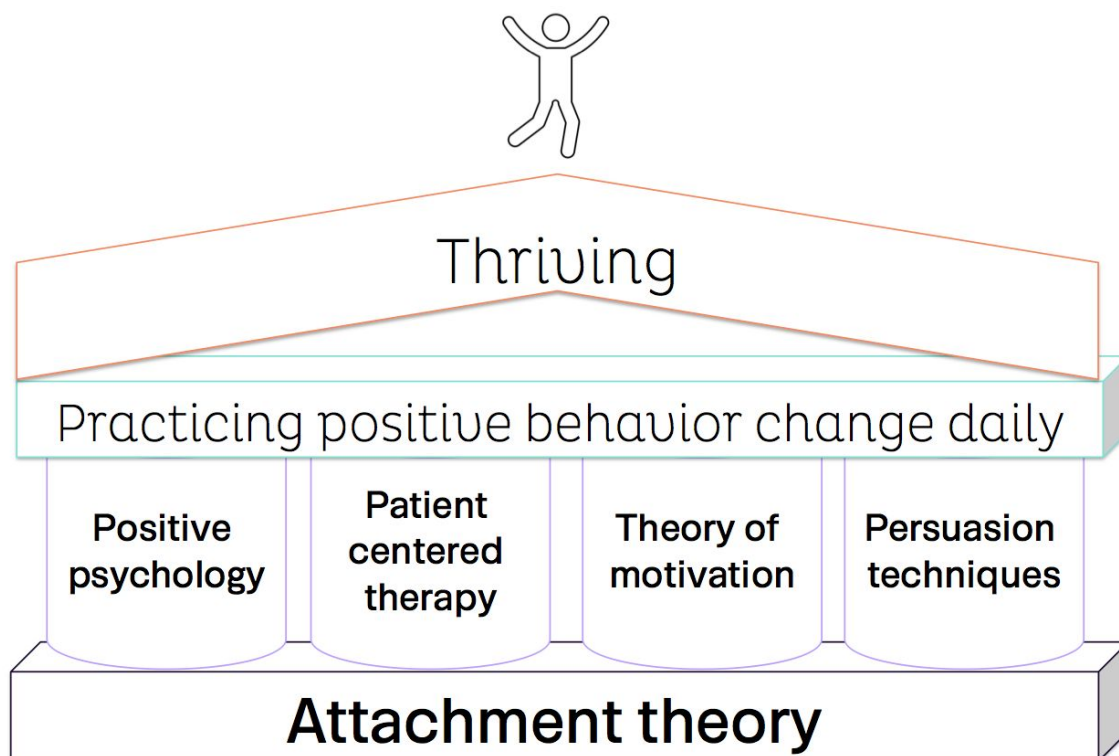
The workshops of the program last about an hour and done with the entire group. These workshops serve to deepen the learning and insights gained in the coaching conversations with the chat bot.

As fall back, iThrive also offers professional certified human coaches, in case people get stuck with their coaching goal and cannot move on in conversation with the chatbot. People can connect with the professional certified coaches for one-on-one coaching via Skype or any other video communication. This additional service is optional and charged per hour. This option has to be discussed and agreed with management upfront.

People can sign up a buddy to get support for your commitments and be accountable. That can be a friend, spouse or colleague. The peer support in form of buddies helps to make behavior change long lasting

Science and our R&D roadmap

We use a framework of humanistic psychology and persuasion techniques, based on a solid foundation of attachment theory (Bowlby, 1959, 1988). Known expert in the field of humanistic psychology are Martin Seligmann positive psychology (Peterson & Seligman, 2004), Carl Rogers client centered therapy (Rogers, 1951) and Abraham Maslow theory of motivation (Maslow, 1943).



Our framework is based on a positive and empathetic approach to the individual that facilitates learning and new experimentation aka practicing new behavior.

Built in the framework is the ambition to make behavior change easy. We want to minimize the use of the individual's mental willpower to implement new behavior. When people attend a training, workshop or have coaching sessions they have often amazing insights. However, when they go back to normal life and into their systems, their teams and their families, they cannot implement their learning.

It also recognizes that we are never in isolation. We are always in relation to others. For new behaviors to be effective they need to be practiced in relation to others.

That famous knowing-doing gap stems - amongst others - from neglecting 3 main principles.

1. Behavior change has to be practiced in relation to others. This is where most behavior change solutions fail, because they are too focused on the individual alone.
2. Users need not only prepare cognitively for the behavior change, but also have to have some means to emotionally engage with the potential outcomes and ideally experience the desired outcome with their entire being.
3. Users need triggers, ability and motivation to successfully change behavior (Fogg, 2009). We aim to facilitate the users optimally in providing more means to build skills, tap into their intrinsic motivation and being triggered by empathetic reminders and their buddy.

We start with empathetic and personalized chat interaction that gives the user the feeling of being seen, heard and understood for who they are. We want to develop iThrive to that extent that we can provide the users with experiences that enable the users to practice their new behavior in context to their system, using intelligent agents and virtual reality.

We are creating experiences for the users, not only mental exercises. In future we want users to converse directly with the chat bot, via voice recognition. The step after is to integrate facial recognition, to intensify the rapport and interaction.

The ultimate aim is the life simulator, using intelligent agents in virtual reality.

We want to use virtual reality to augment certain exercises to intensify the experience. It is powerful to use VR because it feels real, is immersive and interactive.

With funding we want to conduct R&D in the domain of attachment theory, persuasive design, Gestalt therapy and humanistic psychology. These findings need to be translated into business rules and databases that can be used by an intelligent agent to deliver and empathetic interaction with the users.

All of the above combined with the daily habit building on the smartphone makes behavior change effective and easy, in a way as it has not been done before.

Who is already working with iThrive?

Despite being a start-up that only incorporated in 2017, iThrive has done already a couple of pilots in various organizations.

Most noteworthy, iThrive did an alpha test with Pluryn, which indicated qualitatively the effectiveness of the methods used. People were open to the training and wanted more training. The follow up project is currently under negotiation.

The most current pilot runs in a commercial organization. The pilot is confidential. The feedback up until now is that people find it delightful to train with Jean, appreciate the buddy support, get a lot out the program (workshops and webinars) and track on a daily basis their progress.

Here is a few examples of feedback from pilot participants:

"P.S. I am loving the chats. Thank you to all involved for taking the time to make the interactions to smooth and encouraging."

"I am DEFINITELY liking it.. it works great! In a nutshell, yes please send Jean my way everyday."

"The sessions so far have been quite grounding and helpful actually. I don't want it to stop!"

Observers of the offered workshops shared the following observations:

- Participants showed great engagement, with an eagerness to explore and learn
- Participants also showed high levels of self-awareness and a strong desire to tackle issues through coaching
- Energy levels were high and everyone seemed eager to work together and participate in group debriefs/discussions

A word about data privacy and security

We are GDPR compliant. Your data is shared with no-one besides yourself. The data runs over our server in Frankfurt/Germany and Microsoft cloud computing platform Azure. Information of individual users is treated strictly confidential and not shared with the employing organization or any other third party.

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