

# Digital therapeutics (DTx) - Case examples from novel treatment modalities

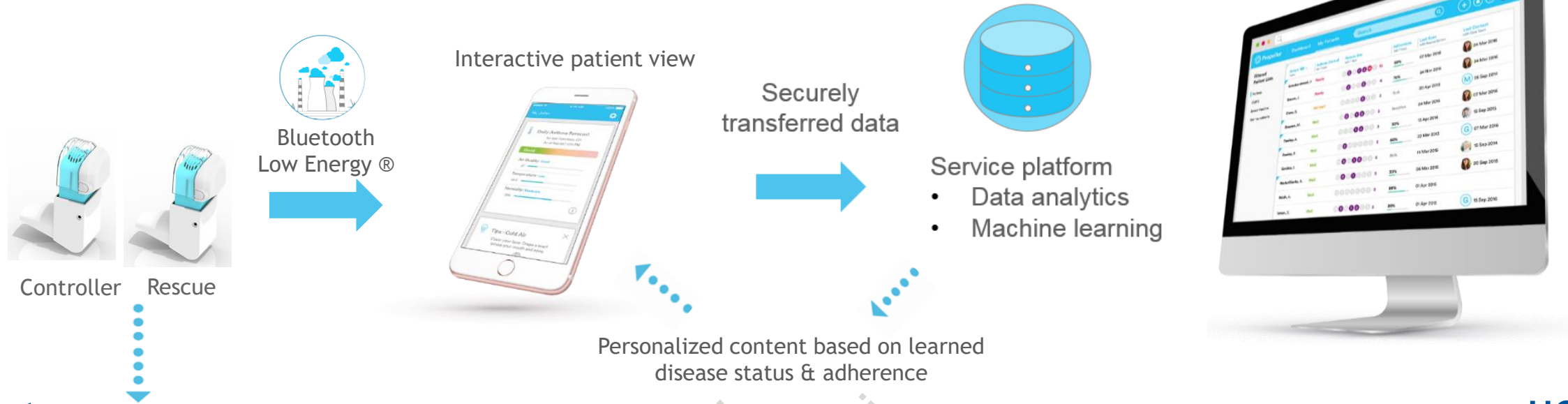
Anssi Mäkineniemi, Head of X Lab, R&D, Orion

# Connected Easyhaler - DTx for Asthma / COPD -



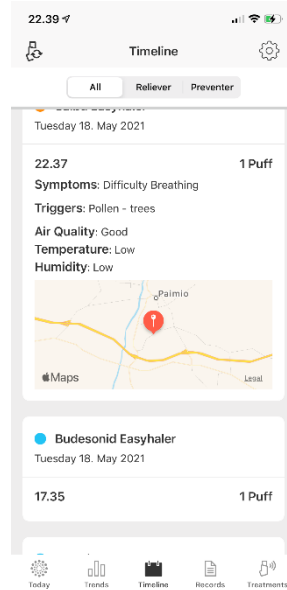
- Manufactured by Propeller Health (US)
- Add-on sensor monitors patient's use of Easyhaler device
- Phase IV clinical study (eMOFEE) on-going in Germany.
  - Measuring the effects of Connected Easyhaler® on adherence in patients with asthma
- Commercial pilots in FI, SE and ES starting in 2022

# Bluetooth-enabled, add-on sensor records a patient's use of the Orion Device



## Patient

- Detection of patient's taken medications
- Improvement of medication adherence via audio reminders and push notifications
- Timely insights on medication use trends, patterns and triggers
- Monthly summaries on control status, adherence, rescue use and asthma control test and/or COPD assessment test
- Alerts for a decline in asthma control status (asthma) and at risk for exacerbation (COPD); alerts are based on rescue medication usage trends and environmental data, utilising developed algorithms and models



## HCP

- Patient drill-down and monitoring report
- Notifications for easy identification of at-risk patients
- On-demand reports for treatment optimisation

PATIENT TYPE	Patient Name	Asthma Control last 7 days	Rescue Use last 7 days	Adherence last 7 days	Last Sync with Rescue Sensor	Last Contact with Care Team
Asthma	Davies, Allison	Not Well	1 1 1 1 1 1 1	57%	11 Jan 2018	N/A
Sensor Inactive	Brown, Mary	Not Well	1 1 1 1 1 1 1	86%	11 Dec 2017	N/A
	Smith, David	Well	1 1 1 1 1 1 1	71%	11 Jan 2018	N/A

# ODD-402

## - DTx for Parkinson's Disease -



To give people living with Parkinson's Disease what they seek most - ways to better cope with day-to-day physical and emotional challenges, optimized treatment, and living a normal life.



To save time for HCPs and offer savings by reducing hospitalization and in-patient costs compared to all other treatments and best supportive care.

# Primary focus now on physical rehabilitation & Speech Therapy

## PHYSICAL EXERCISE / REHABILITATION PROGRAM

PD specific personalized physical exercise program for the different stages of PD. Enables individual motor data collection, critical for ODD-402's algorithm design.



## PSYCHOLOGY SUPPORT

A critical unmet PD need in all markets. Data collected from digital interventions will measure for improvements in PD medications' neuropsychiatric side-effects such as anxiety, sleep disorders, nightmares, amongst others



## MVP DATA DISPLAY

Patients and HCPs will have access to the data collected in the MVP stage to monitor patients' condition



## OVERALL WELLBEING

*Music, yoga, meditation have all been mentioned by experts and Patients as important wellness tools. Data collected will help determine potential therapeutic benefits for further study*

## SPEECH THERAPY

Speech difficulties are a social stigma for PD patients and 90% have no access to speech therapy. The service will help collect baseline speech data for future study on medical therapy adjustments, and how speech therapy and medical therapy can be better orchestrated to control speech issues

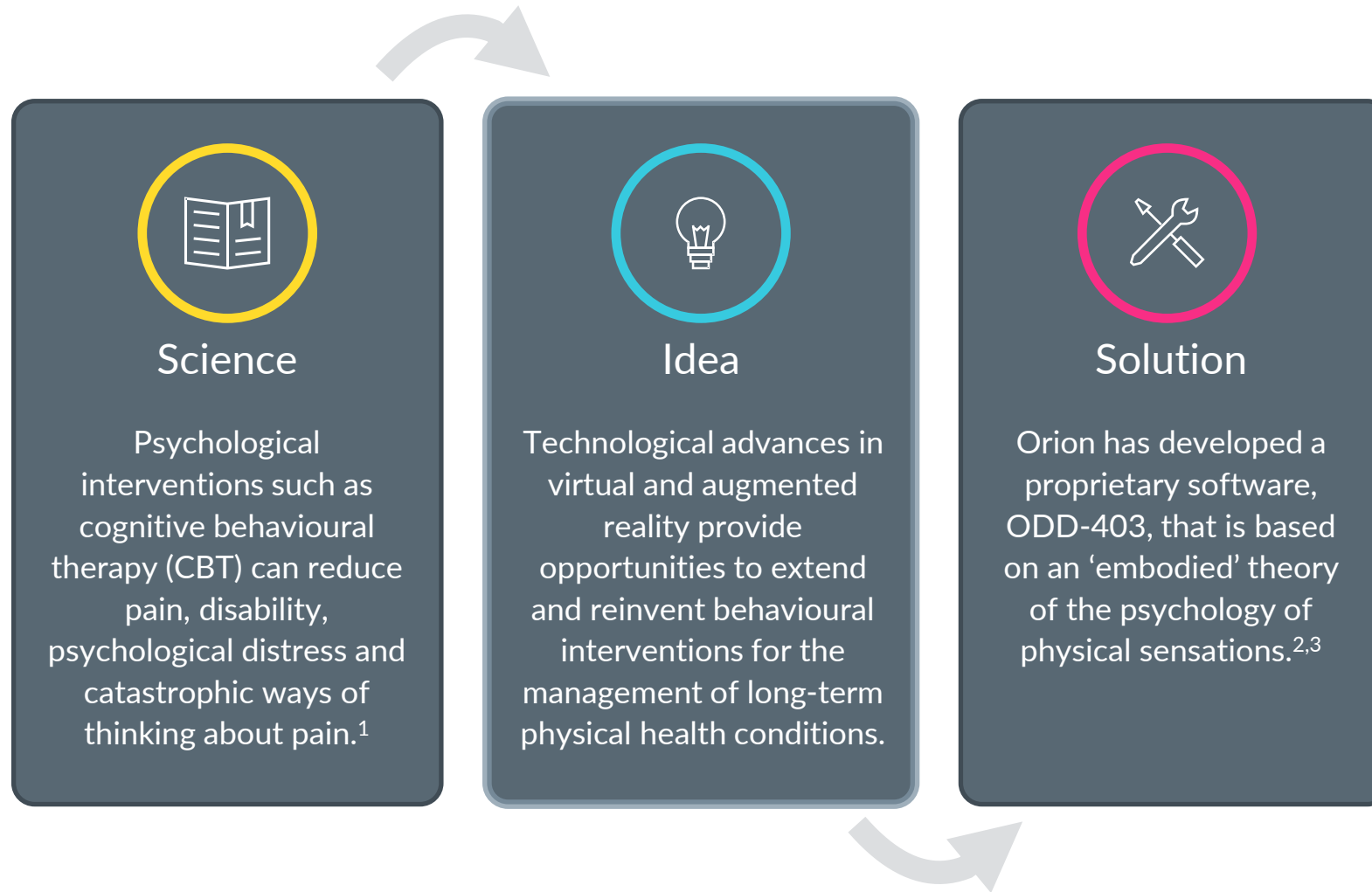


# ODD-403

## - DTx for chronic pain-



# Science Behind



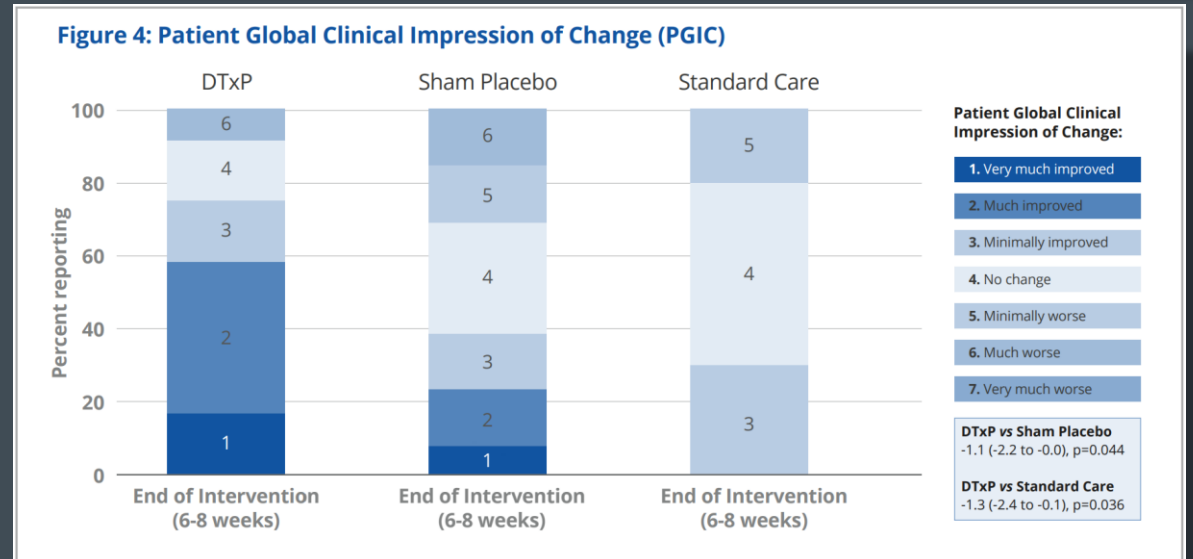
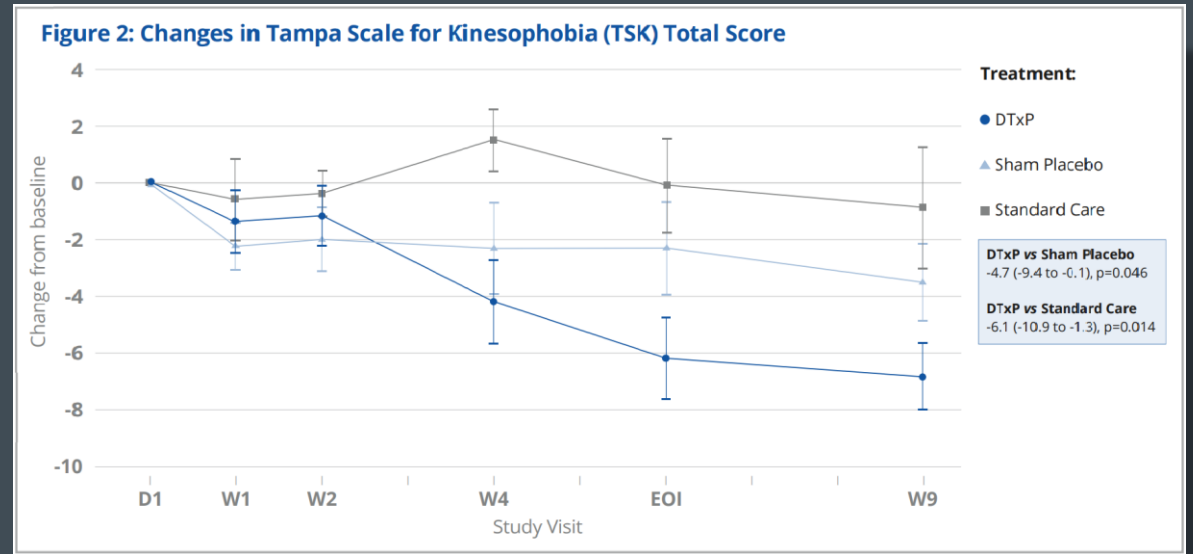
<sup>1</sup>Williams ACDC, Eccleston C, Morley S. Psychological therapies for the management of chronic pain (excluding headache) in adults. Cochrane Database of Systematic Reviews 2012, Issue 11.

<sup>2</sup>Eccleston C (2016) Embodied: the psychology of physical sensation. Oxford University Press, Oxford. ISBN: 9780198727903. e-ISBN: 9780191814099.

<sup>3</sup>Eccleston C et al. (2017) Advancing psychological therapies for chronic pain. F1000Res. 6: 461.

# ≡ Clinical Evidence: VIRPI Pilot Study – Key Results

- Tampa Scale of Kinesiophobia (TSK) shows less fear-of-movement at the end of intervention (6-8 weeks) and 3 weeks after the intervention (9 weeks) in the group that received *DTxP* treatment in comparison to Passive Control and Standard Care groups
- Patient Global clinical Impression of Change (PGIC) scale shows that subjects reported improvement in their condition in *DTxP* group in comparison to Passive Control and Standard Care groups
- Patients treated with *DTxP* show signs of an increased physical activity from week 5 to week 8 in comparison to Passive Control and Standard Care groups
- Patients treated with *DTxP* have improved Quality of Life in comparison to Passive Control and Standard Care groups using EQ-5D-5L
- Game experience questionnaire (GEQ) showed that *DTxP* solution was interesting and engaging until the end of intervention whereas Passive Control solution (also based on VR) was not
- Adverse events are mainly indication related issues and show similar patterns across different groups







## CABIN – the home base

The user enters the virtual world through the cabin. It is a safe space, where one can plan where they want to go and what they want to do.