



## THE RISE OF DIGITAL THERAPEUTICS

### BiolInnovation Institute (BII) & SmiLe Incubator

#### The need / opportunity to be addressed

Digital therapeutics is a spectrum of therapies that use digital technology to prevent, manage and treat health conditions, including using technology to augment or even replace active drugs in disease treatment. Sometimes called “software that’s a medical treatment”, it is a growing field illustrated in examples such as the use of virtual reality (VR) to address mental health disorders, online therapies supporting the adoption of healthy behaviour, and smart pills or robots that promote medication adherence and thus boost the effectiveness of a given drug treatment.

While digital therapeutics (DTx) fall within the larger definition of digital health, a solution is distinguished as a DTx if it is software driven, evidence based, and makes a claim to prevent, manage, or treat a medical disease or disorder.<sup>1</sup>

#### Why it matters

- Digital therapeutics support the larger shift of delivering care outside of traditional healthcare settings such as the hospital or doctor’s office, by overcoming physical and resource constraints which have tended to limit healthcare delivery.
- A key benefit of DTx solutions is the possibility of scaling evidence-based behavioural treatment for access by a wider population, as well as potentially providing a non-pharmaceutical alternative, allowing the patient to be treated without medication-related side effects.
- Digital therapeutics can also enhance the value of conventional pharmaceutical therapies through promoting medication adherence, which is a challenge in many health systems. Poor adherence to medication affects approximately 50% of those who are prescribed medication and contributes to close to 200 000 premature deaths in Europe each year. Medication non-adherence is estimated to cost EUR 125 billion in Europe annually in terms of avoidable hospitalisations, emergency care, and outpatient visits.<sup>2</sup>

<sup>1</sup> Nature 573, S106-S109 (2019), <https://www.nature.com/articles/d41586-019-02873-1>

<sup>2</sup> OECD Health Working Paper No. 105, “Investing in medication adherence improves health outcomes and health system efficiency”.  
[http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DELSA/HEA/WD/HWP\(2018\)2&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DELSA/HEA/WD/HWP(2018)2&docLanguage=En)

## **The challenge owner's point of view / specific interest**

BII and SmiLe Incubator would like to see the following perspectives, where possible, reflected in the pitches:

- Clinical evidence supporting the solution
- Plans for collection of real-world evidence on patient outcomes (and ideally also the results from this, if you have them)
- Deployment strategy: How will the solution be distributed and linked to healthcare systems? How will patient adoption be driven?
- Reimbursement strategy: Who will pay in the target markets?
- What kind of partners are you looking for?
- Who are the potential successors / competitors in the field?