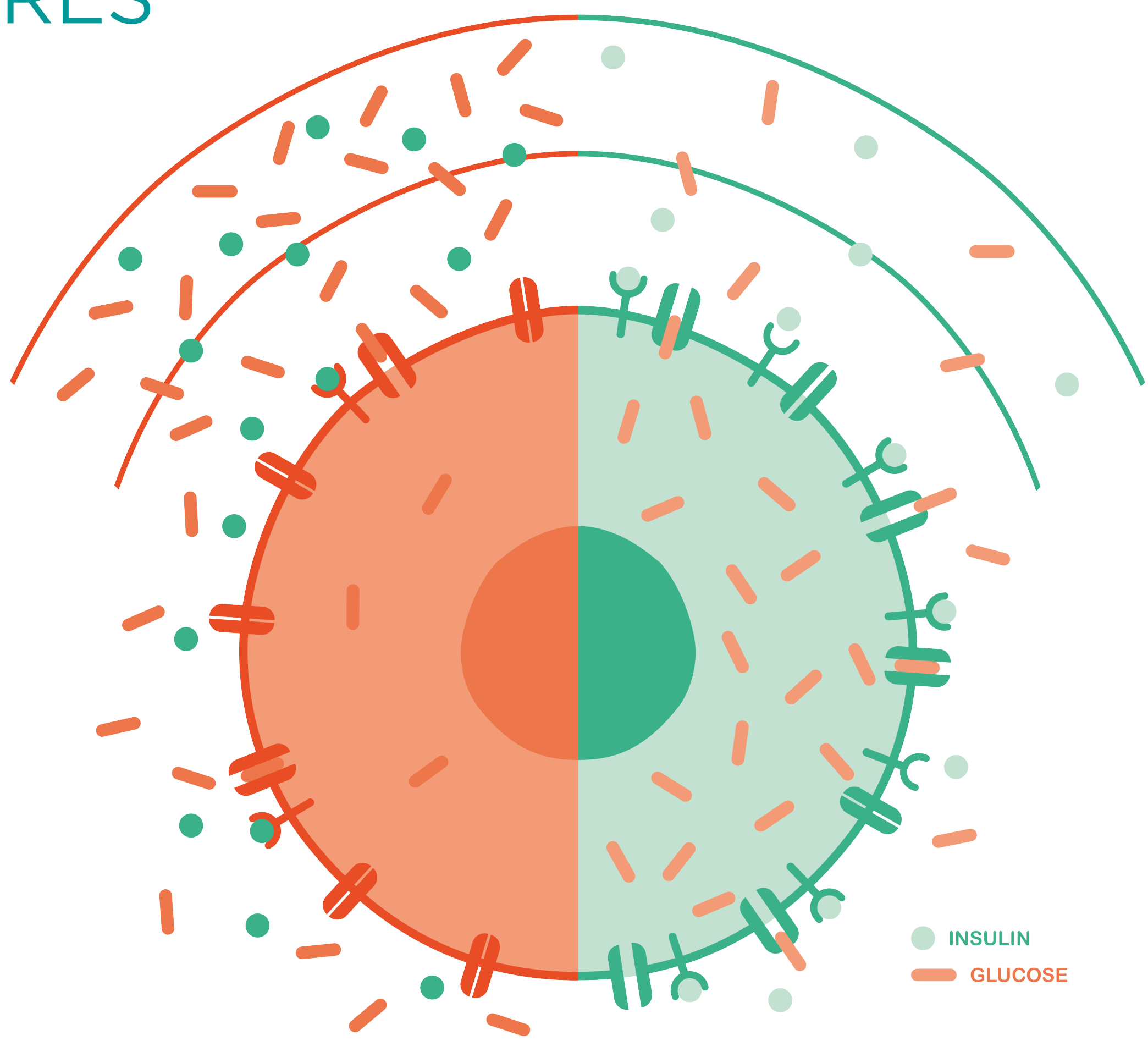



# DIABETES


## FACTS & FIGURES

**FATIGUE**  
**SKIN INFECTIONS**  
EXCESSIVE THIRST AND HUNGER  
**SLOW-HEALING WOUNDS**  
WEIGHT LOSS OR GAIN  
**TINGLING**

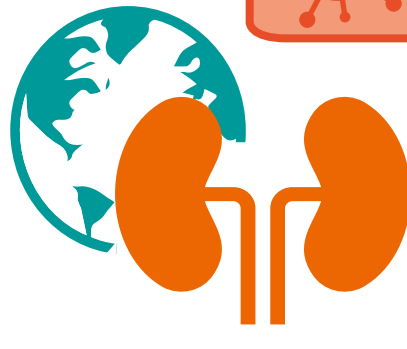





**COVID-19**  
People with diabetes are more likely to have serious complications from COVID-19



**COVID-19**



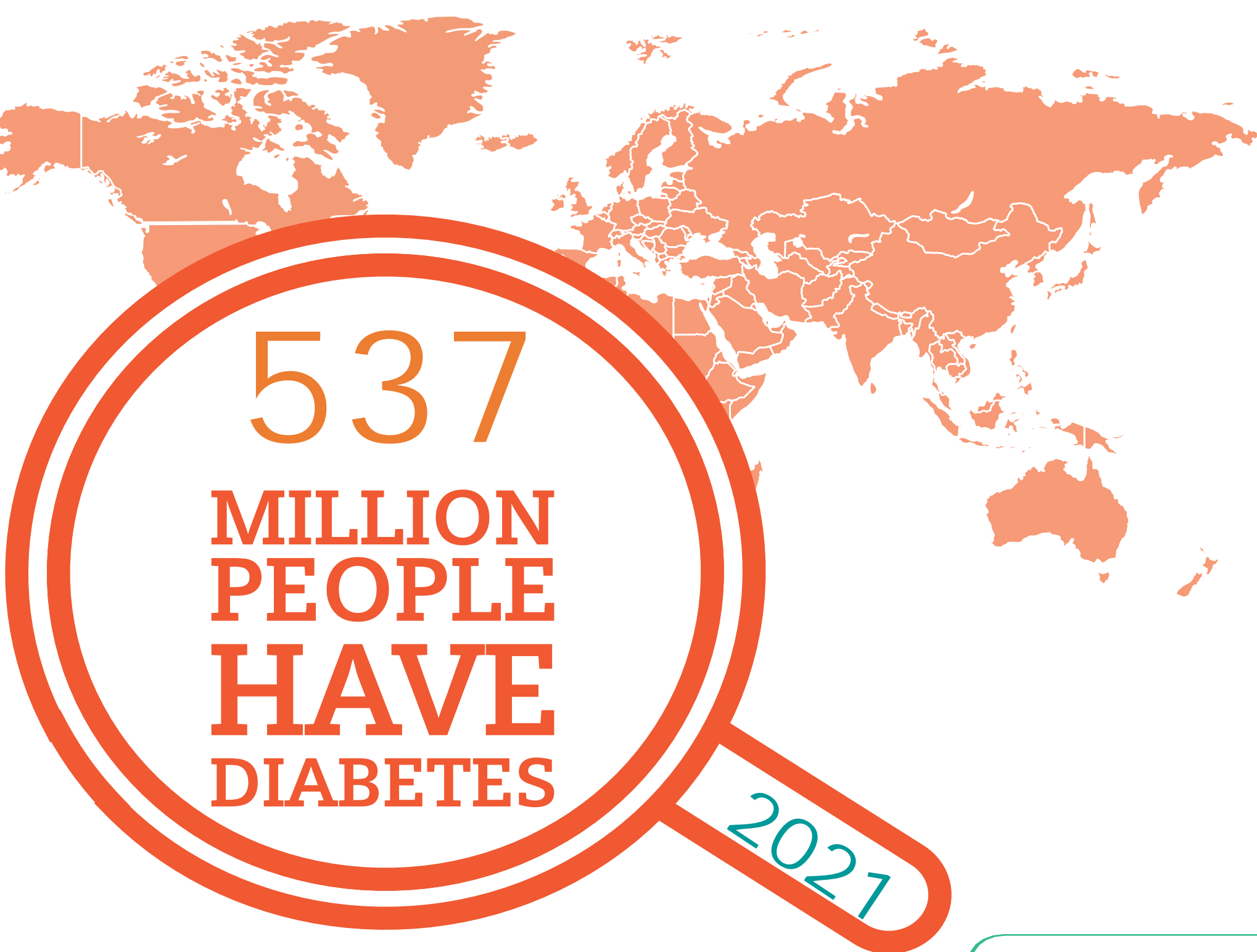
**DIABETES**  
IS A LEADING CAUSE OF KIDNEY DISEASE. APPROXIMATELY, 1 OUT OF 4 ADULTS WITH DIABETES HAVE KIDNEY DISEASE.



## DIABETES PATIENTS



**1.5 X**  
MORE LIKELY TO  
**HAVE A STROKE**  
**1.8 X**  
MORE LIKELY TO  
**HAVE A HEART ATTACK**




**RISK FACTORS**

- ☒ NOT PHYSICALLY ACTIVE
- ☒ HIGH BLOOD PRESSURE
- ☒ 45+ YEARS OLD
- ☒ FAMILY HISTORY
- ☒ OVERWEIGHT

NUMBER OF PEOPLE LIVING WITH DIABETES IS PROJECTED TO RISE TO 643 MILLION BY 2030 & 783 MILLION BY 2045


3 IN 4 ADULTS WITH DIABETES LIVE IN LOW AND MIDDLE INCOME COUNTRIES



6.7 M  
DEATHS DUE TO  
DIABETES IN 2021

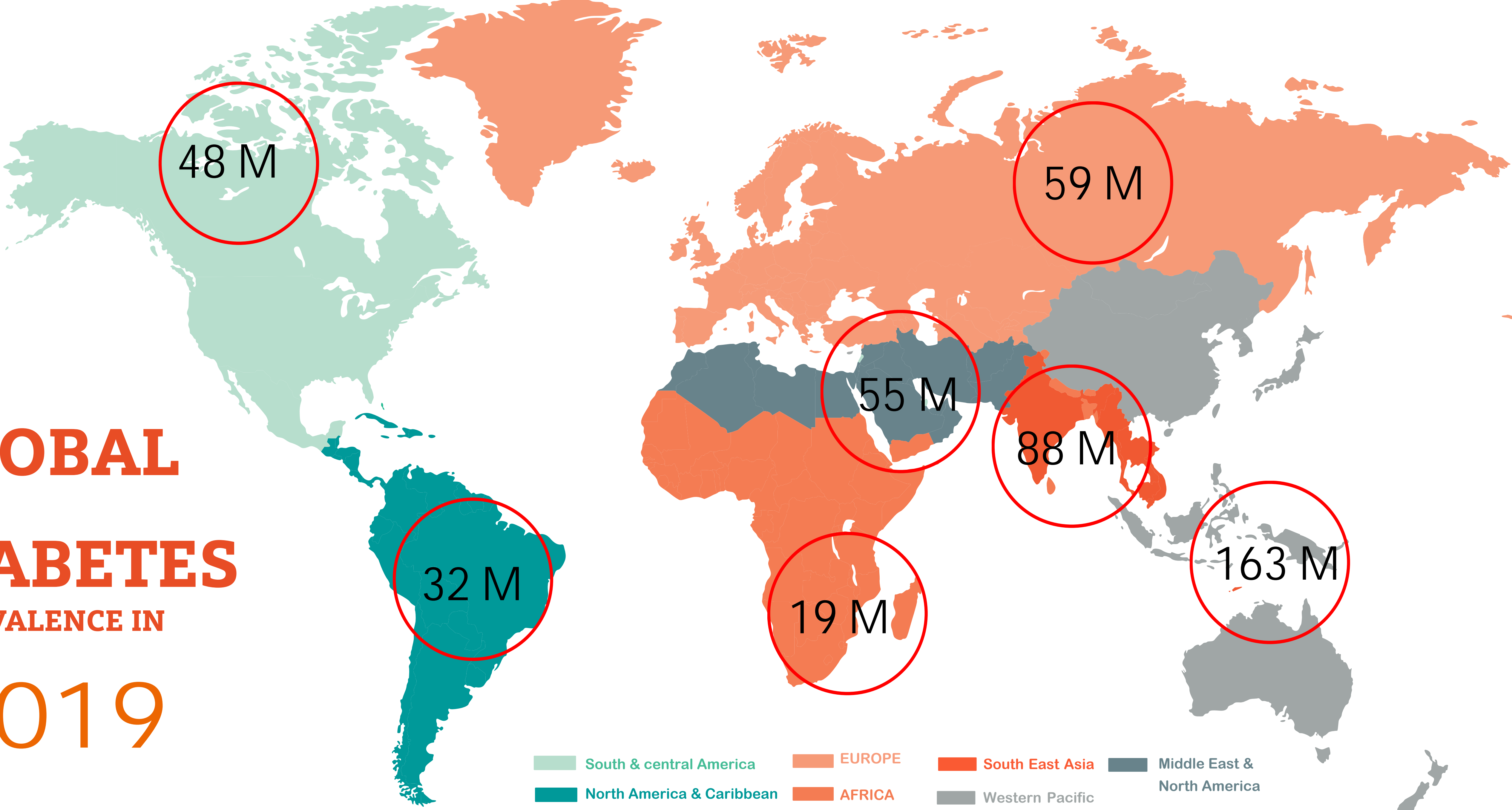


**GLOBAL DIRECT  
HEALTH EXPENDITURE  
ON DIABETES IS  
USD 760B IN 2019**



541M ADULTS  
HAVE IMPAIRED  
GLUCOSE  
TOLERANCE (IGT),  
WHICH PLACES  
THEM AT HIGH  
RISK OF TYPE 2  
DIABETES

## GLOBAL DIABETES PREVALENCE IN 2019



We thank our numerous ITT team members, alumni and collaboration partners worldwide for their contribution to the pathways.

1.Diabetes and Stroke,Cleveland Clinic-2021, [https:// my.cleveland-clinic.org/health/diseases/9812-diabetes-andstroke#:~:text=What %20is%20dia-betes%20stroke%20risk,stroke%20as%20people%20with-out%20diabetes.](https://my.cleveland-clinic.org/health/diseases/9812-diabetes-andstroke#:~:text=What%20is%20dia-betes%20stroke%20risk,stroke%20as%20people%20with-out%20diabetes.)

2.Diabetes symptoms: When diabetes symptoms are a concern,2021: <https://www.mayoclinic.org/diseases-conditions/diabetes/in-depth/diabetes-symptoms/art-20044248>

3.Healthy People, 2020 Topics & Objectives: Diabetes, 2016. <https://www.healthypeople.gov/2020/topics-objectives/topic/diabetes>

4.International Diabetes Federation,IDF Diabetes Atlas 2021:<https://diabetesatlas.org/>

5. Risk of developing diabetes,2019:<https://www.medicalnewstoday.com/articles/317375#age-and-diabetes>

6. Siemens Healthineers. Diabetes Overview and Testing, 2017. <https://www.siemens-healthineers.com/en-au/laboratory-diagnostics/assays-by-diseases-conditions/diabetes/diabetes-testing>

7. Global and regional estimates and projections of diabetes-related health expenditure: Results from the International Diabetes Federation Diabetes Atlas, 9th edition,2020, [https://www.researchgate.net/publication/339232758\\_Global\\_and\\_regional\\_estimates\\_and\\_projections\\_of\\_diabetes-related\\_health\\_expenditure\\_Results\\_from\\_the\\_International\\_Diabetes\\_Federation\\_Diabetes\\_Atlas\\_9th\\_edition#:~:text=Results%3A%20The%20estimated%20global%20direct,USD%20845%20billion%20by%202045.](https://www.researchgate.net/publication/339232758_Global_and_regional_estimates_and_projections_of_diabetes-related_health_expenditure_Results_from_the_International_Diabetes_Federation_Diabetes_Atlas_9th_edition#:~:text=Results%3A%20The%20estimated%20global%20direct,USD%20845%20billion%20by%202045.)

8.How COVID-19 Impacts People with Diabetes: <https://www.diabetes.org/coronavirus-covid-19/how-coronavirus-impacts-people-with-diabetes>

9.Global prevalence of diabetes,2019,<https://www.ekfdiagnostics.com/diabetes-and-hba1c-testing.html>



An extensive research- based analysis from 40+ scientific articles and journals in combination with hospital workflow experience allowed the identification of painpoints and solutions

These solutions were proposed based on AI, IoMT, AR/VR, Biosensors, nanorobotics and smart wearable technologies

THROUGH THIS CAREPLAN WE HIGHLIGHT DATA FROM A COLLECTION OF

96  
painpoints

133  
respective  
solutions

14  
are connected to  
different stakeholders

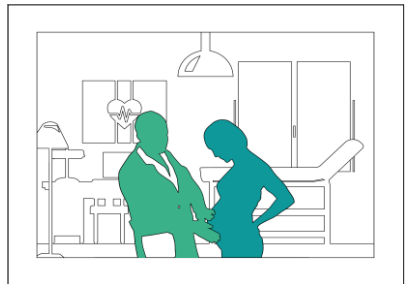
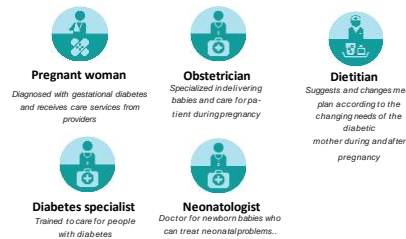
Disclaimer: The Disease pathways framework could be used to elaborate different diseases. Various pain points, solutions, and statistical data are not just example illustrations and are not subjected to be considered as recommendations by the reader.

Website:  
<https://www.siemens-healthineers.com/careers/innovation-think-tank>

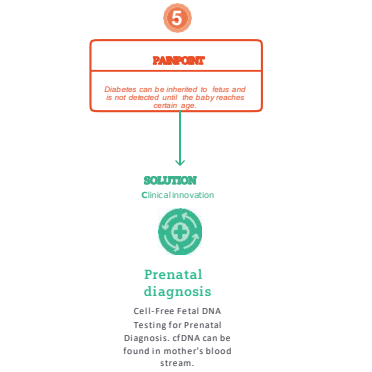
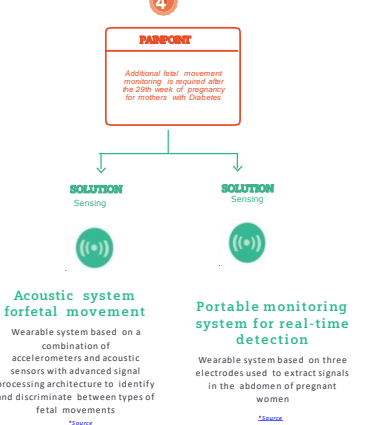
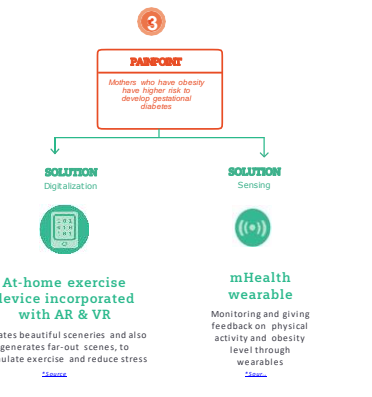
## 1 PRENATAL

HOSPITAL  
Consultation room

### STAKEHOLDERS



Pregnant woman is suffering from gestational diabetes



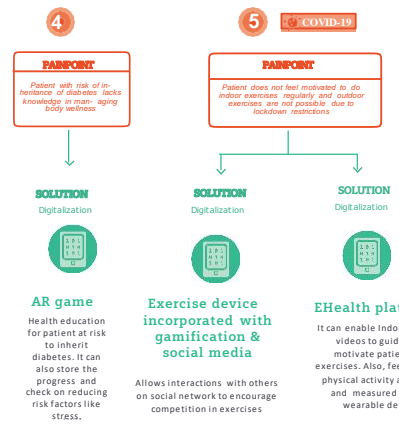
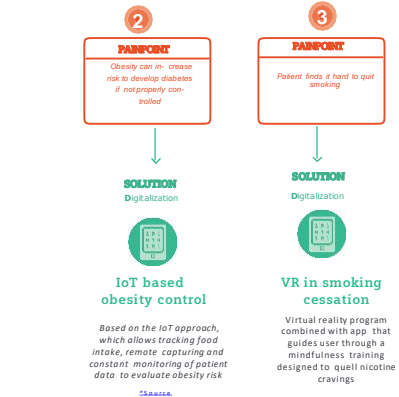
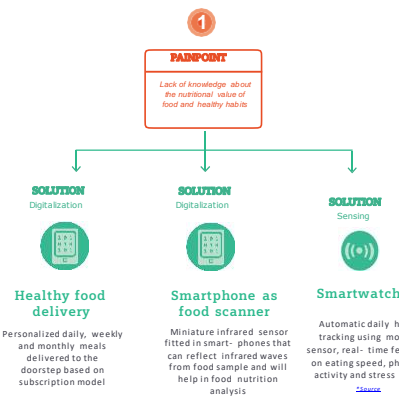
## 2 PREVENTION

HOME  
Kitchen/Exercise Room

### STAKEHOLDERS



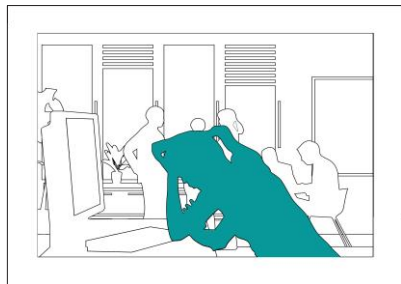
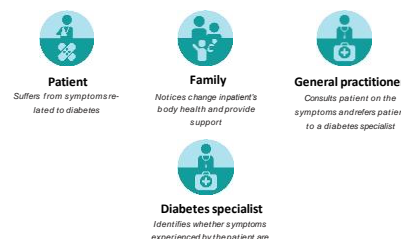
Patient exercises regularly and keeps a healthy lifestyle



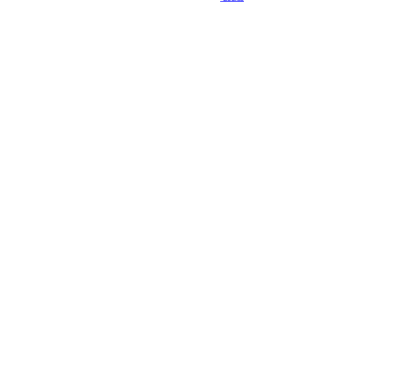
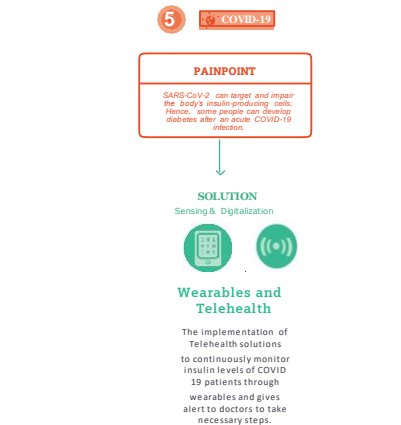
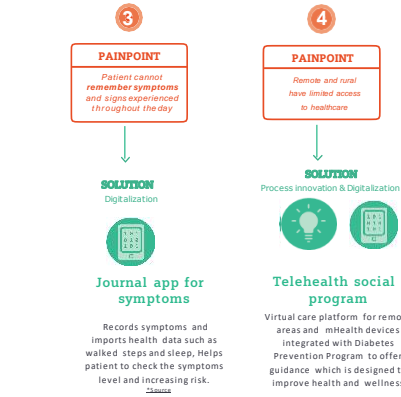
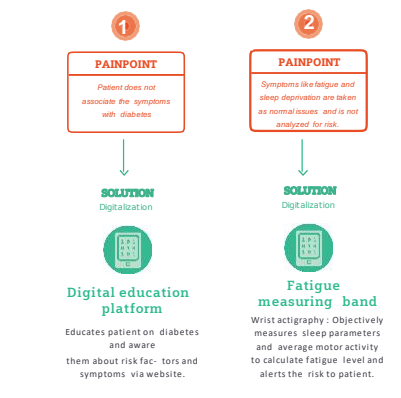
## 3 SYMPTOMS

HOME/AT WORK  
Living room/ office

### STAKEHOLDERS



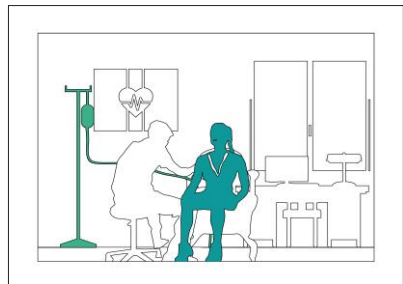
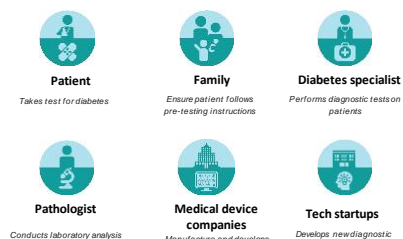
Patient experiences symptoms such as excessive thirst and hunger, frequent urination, fatigue and slow-healing wounds



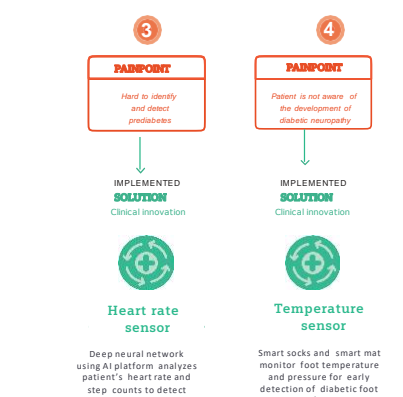
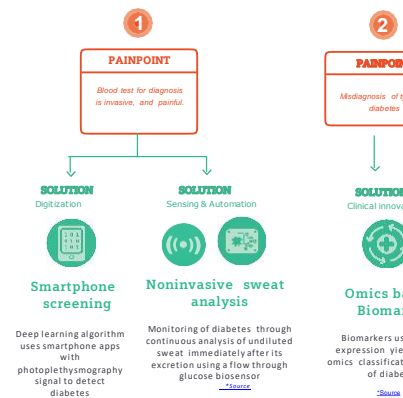
## 4 DIAGNOSIS

HOSPITAL/HOME  
Consulting room/Living room

### STAKEHOLDERS



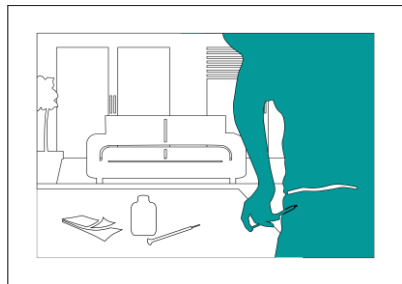
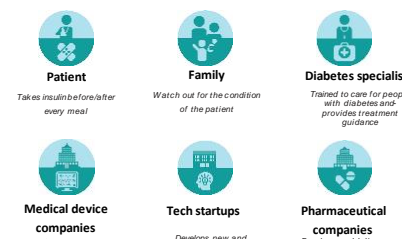
Patient visits a doctor to receive diagnostic test.



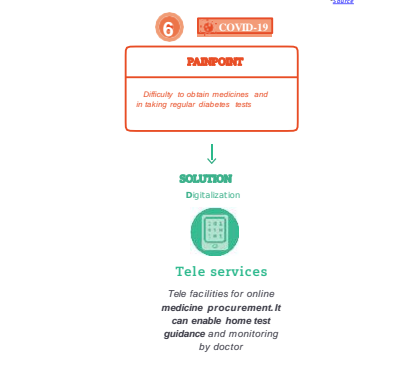
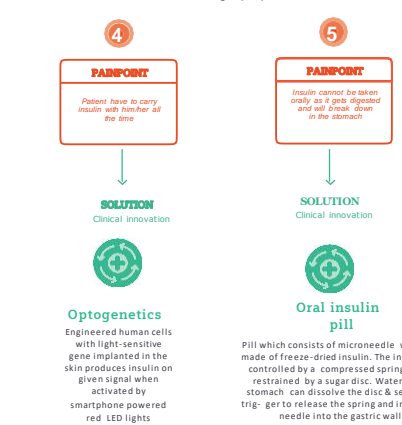
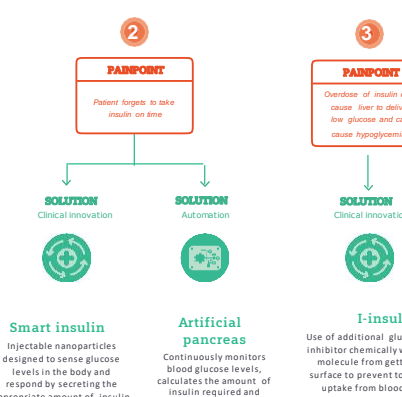
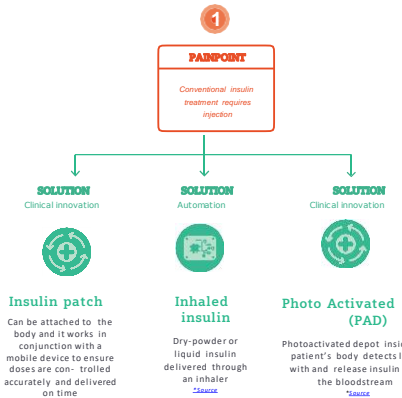
## 5 TREATMENT

HOME  
Living room

### STAKEHOLDERS



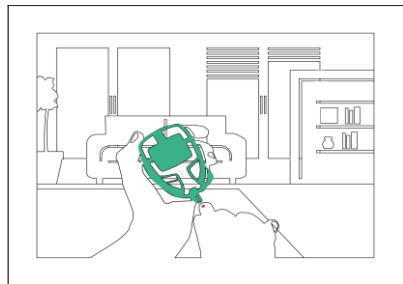
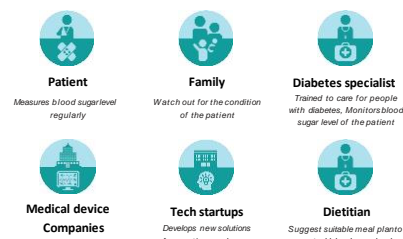
Insulin therapy with long-acting or short-acting insulin through injection, pump or jet system



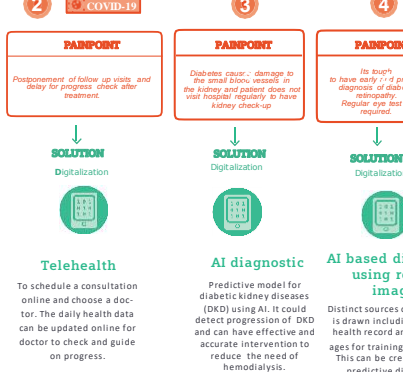
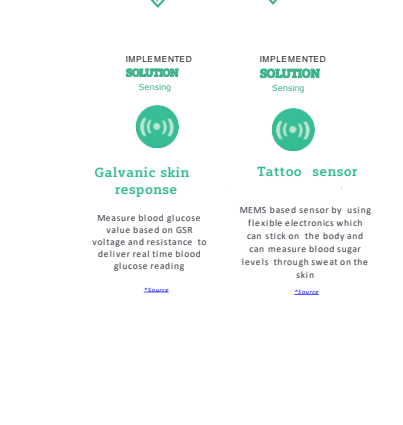
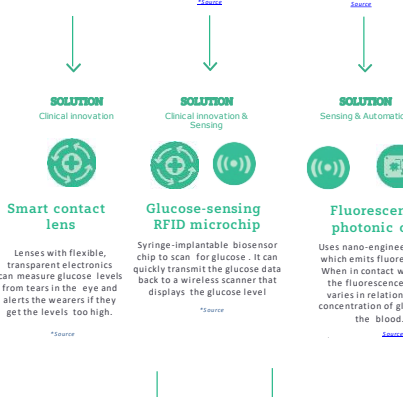
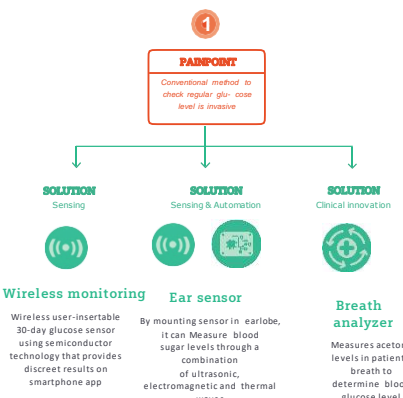
## 6 FOLLOW-UP

HOME  
Living room

### STAKEHOLDERS



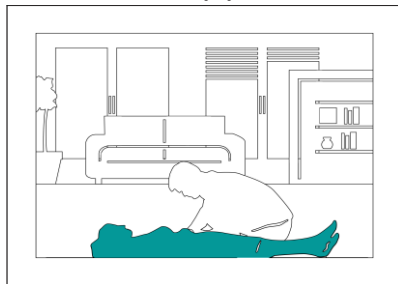
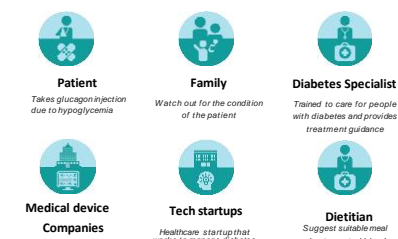
Continuous monitoring of blood sugar level required to check progress of treatment



## 7 OUT-PATIENT

HOME  
Living room

### STAKEHOLDERS



Patient experiences hypoglycemia

