



Fast AI

TECHNOLOGY FOR ACUTE STROKE DETECTION

Worldwide impact of stroke

#1

**cause of
disability**

Total number of ppl
currently living with
stroke is nearly 80 mln

#2

**cause of
dementia**

11 mln per year
worldwide, second
only to Alzheimer's

#2

**cause of
death**

7mln per year
worldwide, second
only to heart attack

more than
\$100B

**indirect
costs**

Each year more than
\$68.5bn/y in the US and
nearly \$70bn/y in Europe

Stroke facts

**8 out
of 10**

patients will have disability

**Every minute
= 2 million**

brain cells lost

**Every hour
= 3.6 years**

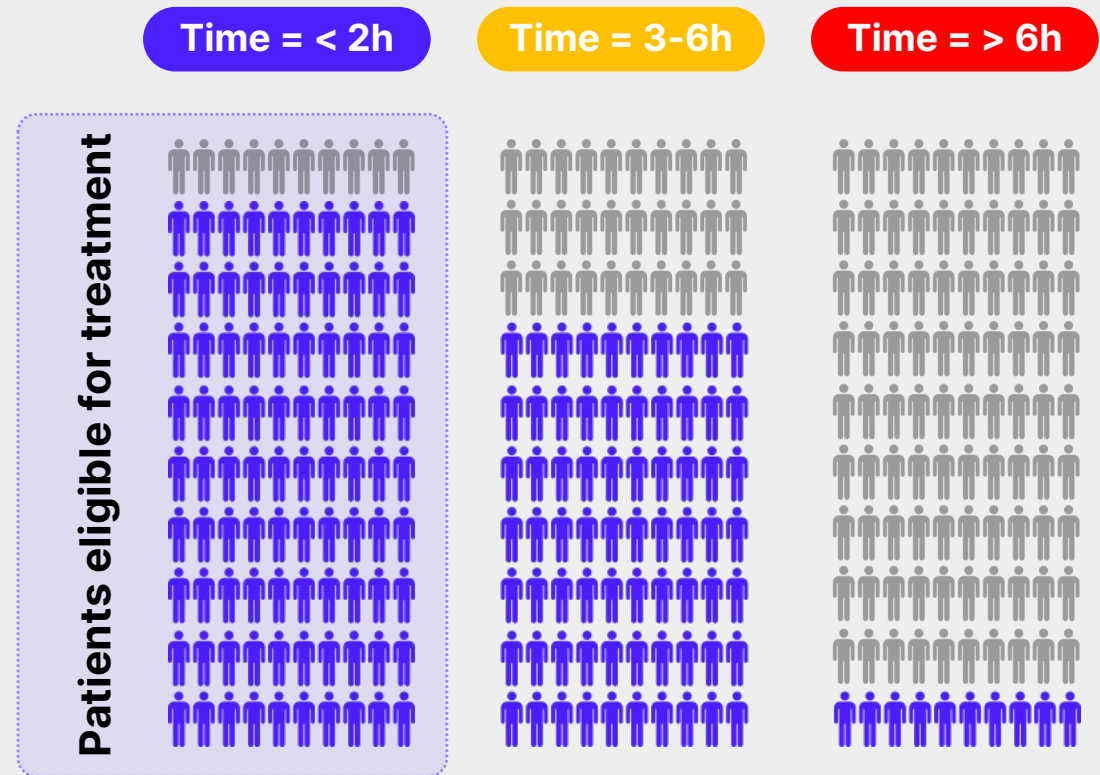
of premature aging

TIME LOST IS BRAIN LOST!

Stroke is treatable if caught early!

Up to 70% of all stroke patients will achieve full recovery if treated within

2h



Current problem

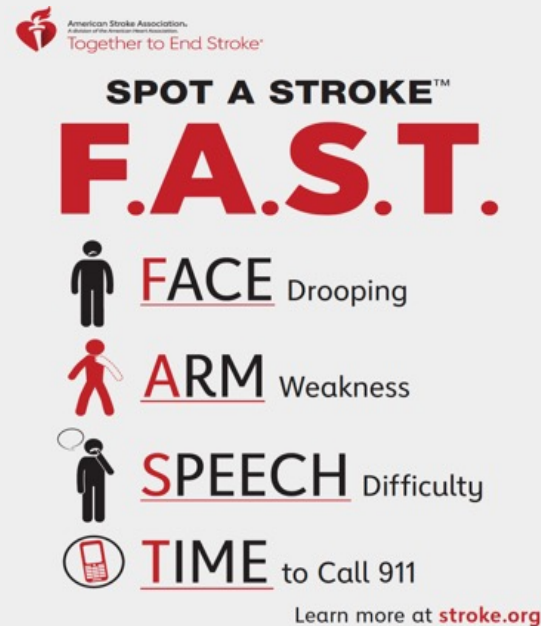
8 out of 10 stroke patients arrive too late!

27% don't know

70% can't call

Act F.A.S.T. Save Lives

- Worldwide approved campaign for stroke recognition
- Simple methodology for general public

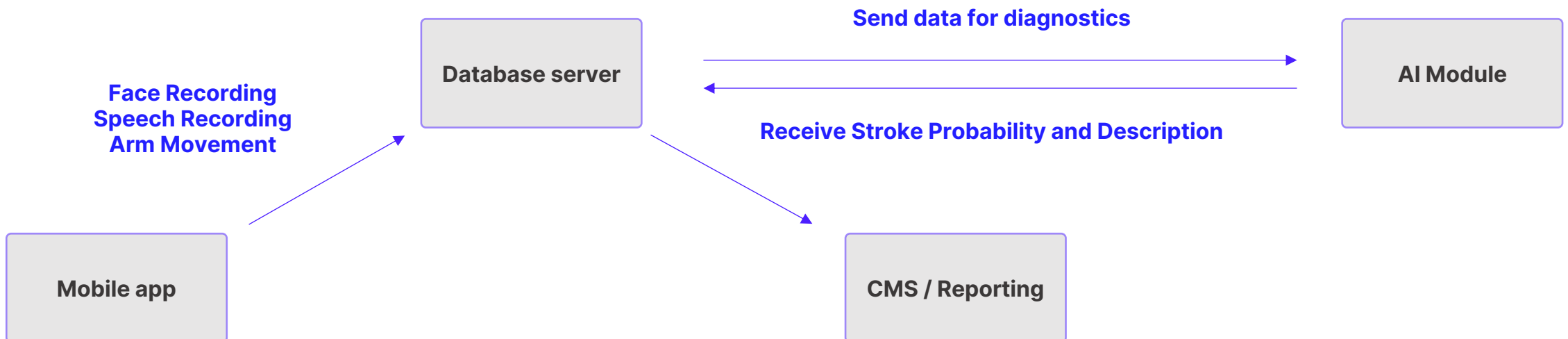


Applicable only if people are properly educated and aware of it!

We automated F.A.S.T

Platform/device independent: SDK, cloud-based SaaS, mobile

Detects acute stroke and immediately notify patients, relatives, and EMS



Process of validation

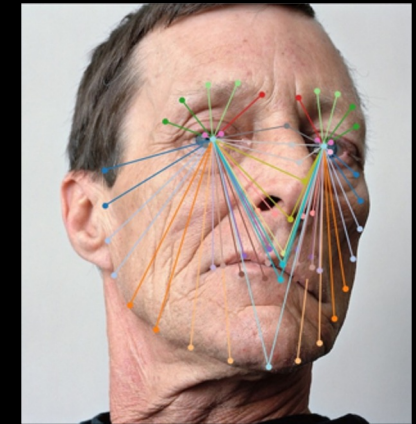
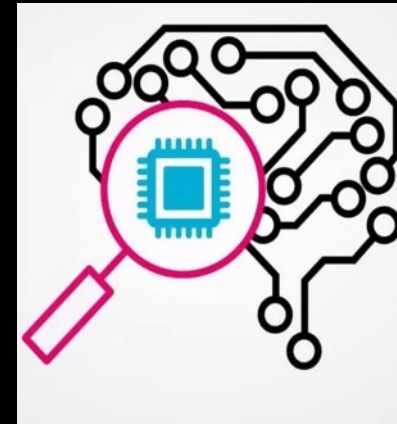
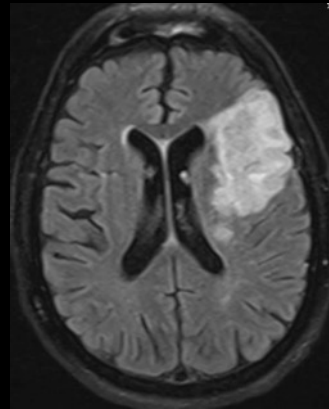
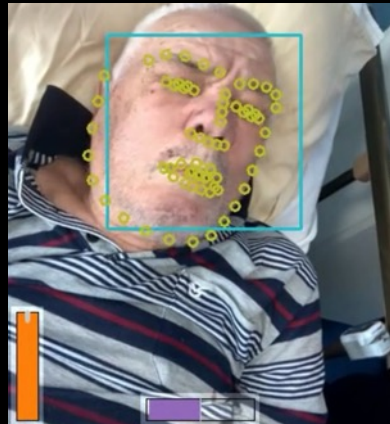
Neurologists use
Fast AI on real
stroke patients

Correlation with
clinical exam and
impression

Correlation with
brain imaging
data

Data analysis and
optimization of
the algorithm

Continued testing
and final
validation in 1500
patients



Our partners

Grants received for MVP development



BI: World's largest private pharmaceutical company and producer of clot-busting medication for stroke
Angels Initiative: world's largest initiative for improving acute stroke care with presence in over 100 countries

Data collection from real stroke patients



BNS: Access to abundance of stroke patients
Already working with 5 stroke centres in Bulgaria
More than 40 neurologists actively involved

Competitive advantage

Unique ecosystem

World recognized experts in stroke from the US

+

Streamlined process of gathering annotated clinical data

+

Development team from a leading IT hub in the EU

Current progress

5

**Major stroke
centers**

40

**Neurologists
involved**

200

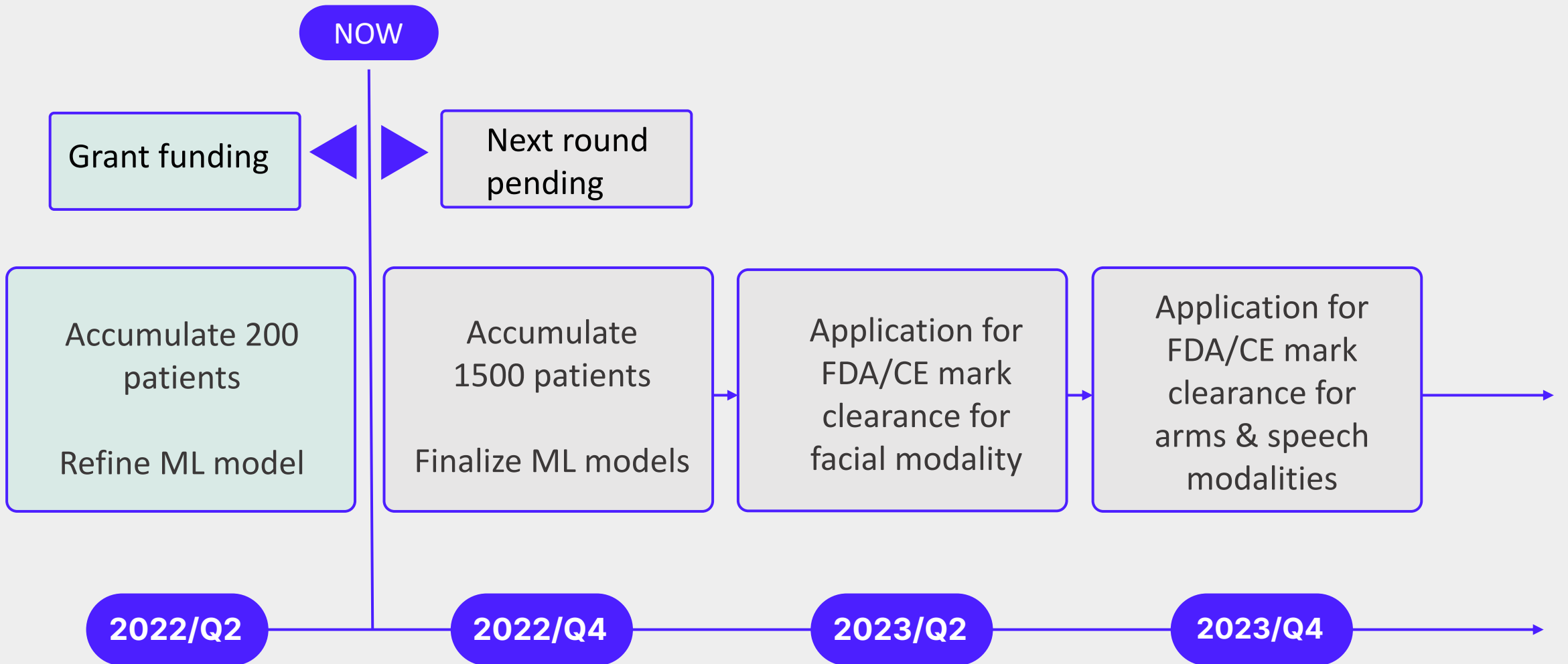
Patients

97%

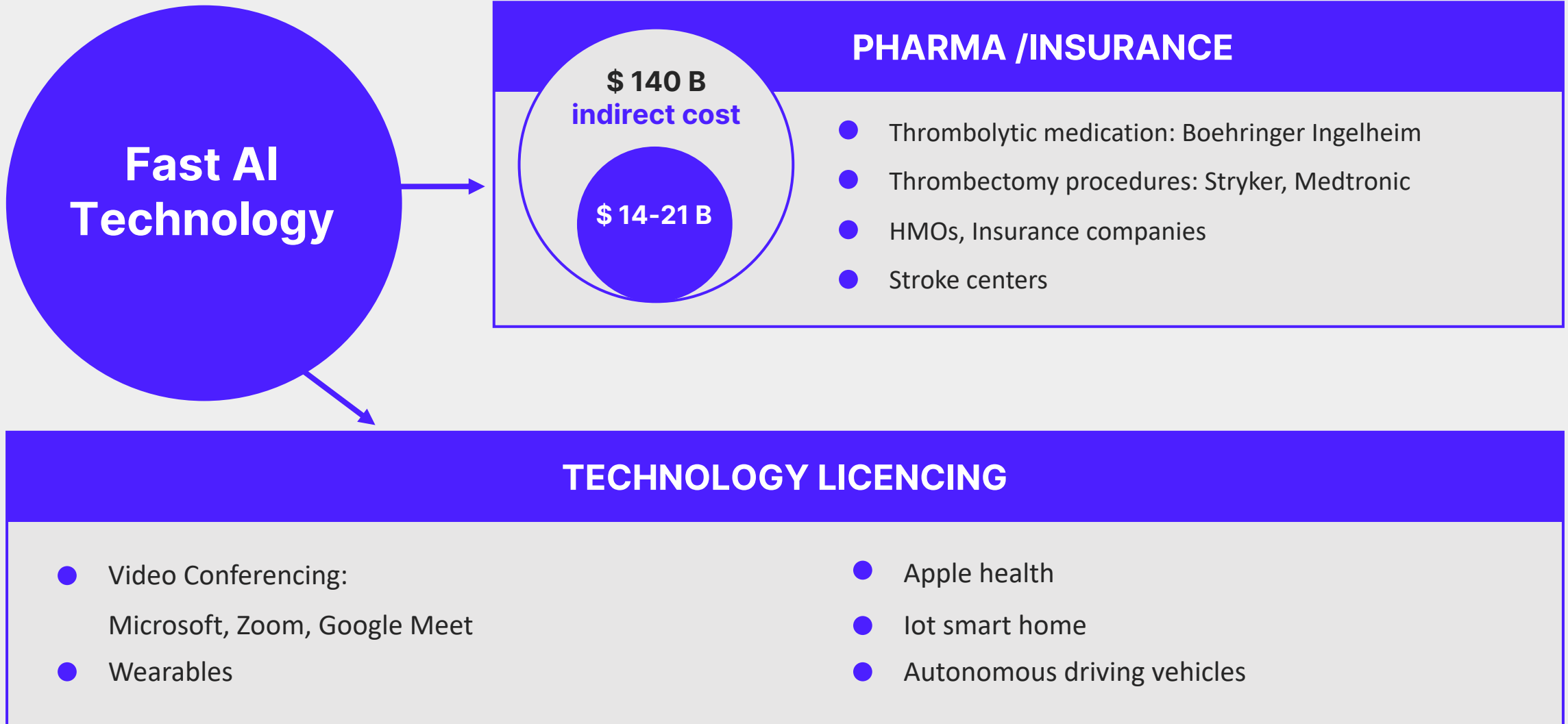
**Accuracy
compared to
neurologist's
impression**

Less than 6 months

What's next



Business model



Team

MANAGEMENT



Radoslav Raychev, MD
Co-founder & CEO



Todor Todorov
Co-founder & COO



Krasimir Stoev
CTO

TECHNOLOGY ADVISORS



Svetlin Penkov, PhD
ML/AI advisor



Daniel Angelov, PhD
ML/AI advisor

MEDICAL ADVISORS



David Liebeskind, MD
Medical advisor



Jeffrey Saver, MD
Medical advisor



Phillip Alexiev, MD
Medical advisor

Thank you!

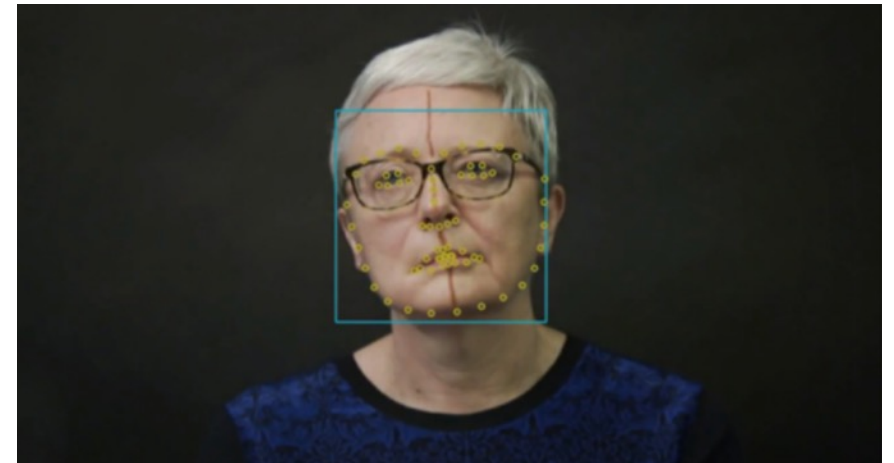
How it works:

Face

We use video recording and state-of-art ML algorithms based on computer vision to capture and track:

- facial asymmetry
- unilateral change of facial movement

Probability
of symptom



Right

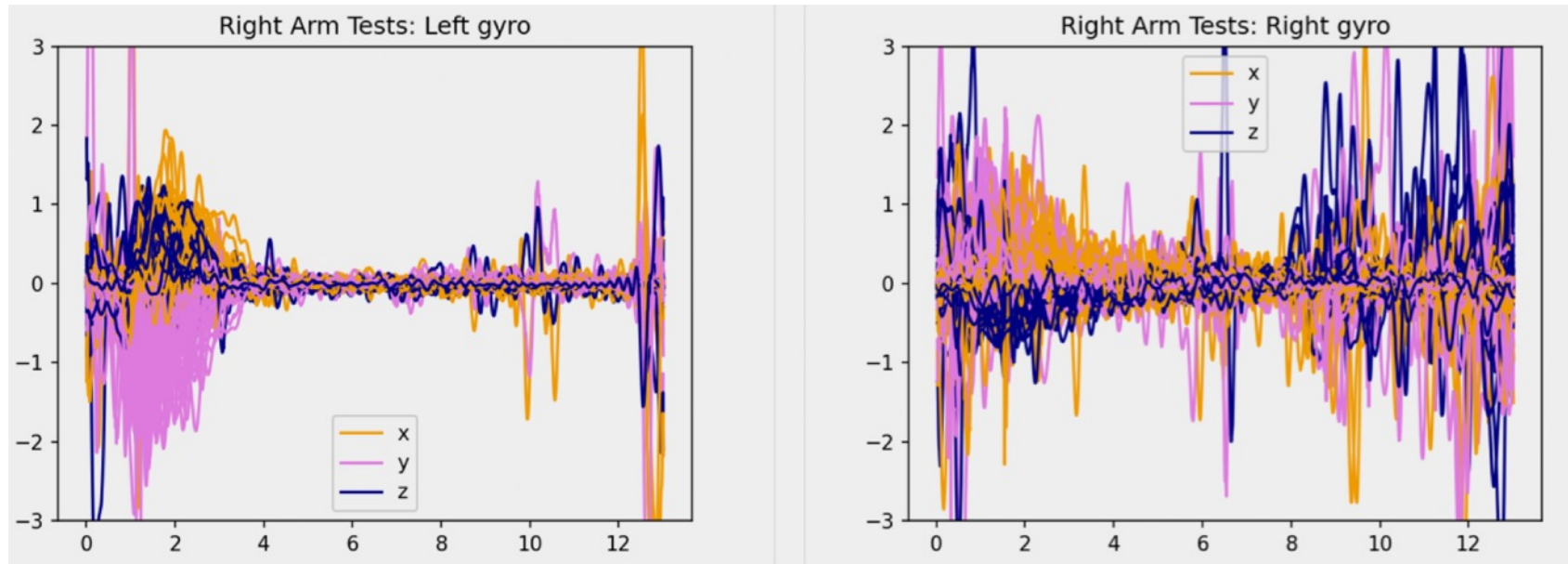


Left

Affected
side

How it works: Arms

We use device sensors (gyroscope, accelerometer, magnetometer) to assess arm movement abilities and strength

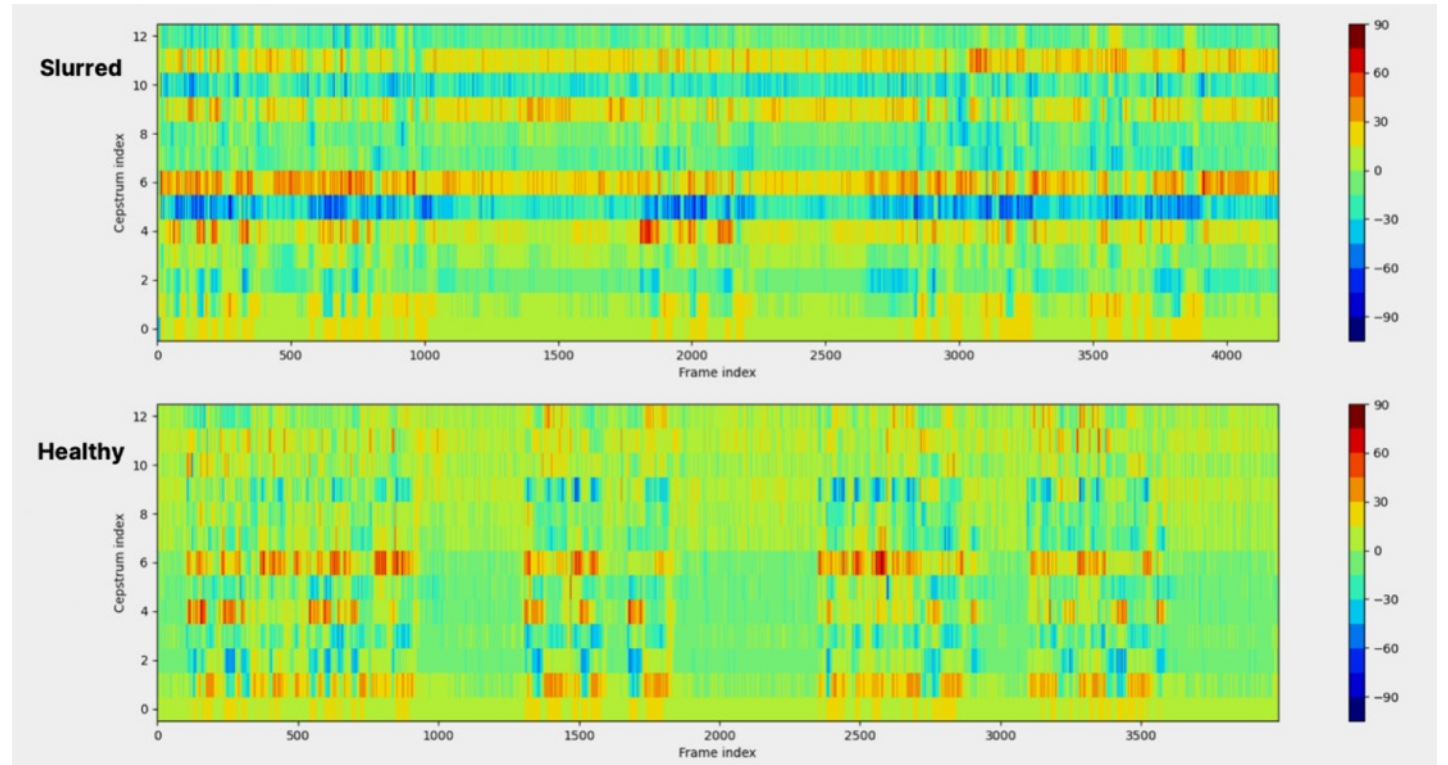


Gyro Data from
Affected Right Arm
tests

How it works: Speech

We use video recording to conduct analysis of sound variability patterns to capture:

- slurred speech
- speech abnormalities



Mobile application of F.A.S.T.

We use video recording and state-of-art ML algorithms based on computer vision to capture and track:

