



**BioEcllosion®**

ENHANCING RAPID TESTS FOR WORLDWIDE DIAGNOSTICS



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# Executive summary

**BioEcllosion SL** aims to be the new gold standard for early detection of diseases affecting global health by means of the next generation of rapid diagnostic test using a novel medical device, **MagnetPlex**.








**MagnetPlex** a magneto-actuated based medial device which takes the immunoassay from the laboratory with applications in human health, animal health, food safety and environmental control. Moreover, it can be extended to low resource settings in emerging countries with no developed health systems

Indeed, **BioEcllosion** offers an engaging opportunity to shareholders based in a value proposition that will generate short to long term revenues by means of three main identified assets – **MagnetPlex** device, diagnostic products for societal challenges, and big data availability- with scalable business models.

**BioEcllosion** is developing the first product of the company, **CeliFast**, an in vitro point-of-need quantitative test for the early detection of celiac disease in only 10 minutes at practitioners' site and at a much-reduced cost.



Patent EP21382709.0

-  Magnetic Immunoassay
-  Lab quantitative results
-  Drop of blood
-  10 minutes test
-  8h Battery autonomy
-  App connected
-  Hand held



# Investment proposal

Sep 2022

Sep 2023

Apr 2025

## Seed Round – 12 months

- ✓ MVP medical device
- ✓ Clinical File
- ✓ Scientific Validation CeliFast

500k €

## Series A – 20 months

- ✓ Final Product
- ✓ CeliFast CE mark
- ✓ P5638EP00 National Phases

2000k €

## Series B – Exit

- ✓ Product expansion (US/Canada)
- ✓ Consolidate Research facilities
- ✓ Vet application pipeline

5000k €

2022

2023

2024

2025

2026

2027



Product Development

Product Validation



Manufacturing Implementation



QA implementation

Commercialization

Pre-money – 1.500.000€

Shares – 25%

Applications Development



**CeliFast (Q1 2025 First Sale)**



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# Technology review - Why MagnetPlex ?

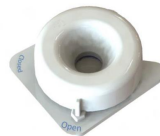
**BioEclasion** solutions navigates through different therapeutic and technological fields, which driven its expected growth. MagnetPlex provides a transversal solution for diagnostic tools on IVD sector by combining the potential of magnetic particles coupled to a standard tablet or smartphone.

**MagnetPlex embraces the WHO guidelines for point-of-need devices:**

- A**ffordable (for those at risk of infection)
- S**ensitive (minimal false negatives)
- S**pecific (minimal false positives)
- U**ser-friendly (minimal steps to carry out test)
- R**apid & **R**obust (no need for refrigerated storage)
- E**quipment-free (no complex equipment)
- D**elivered (to end users).

**MagnetPlex** is composed by two main components:

**1) Single-use Cartridge**



**2) Digital reader**



Patent EP21382709.0



Magnetic Immunoassay



Lab quantitative results



Drop of blood



10 minutes test



8h Battery autonomy



App connected

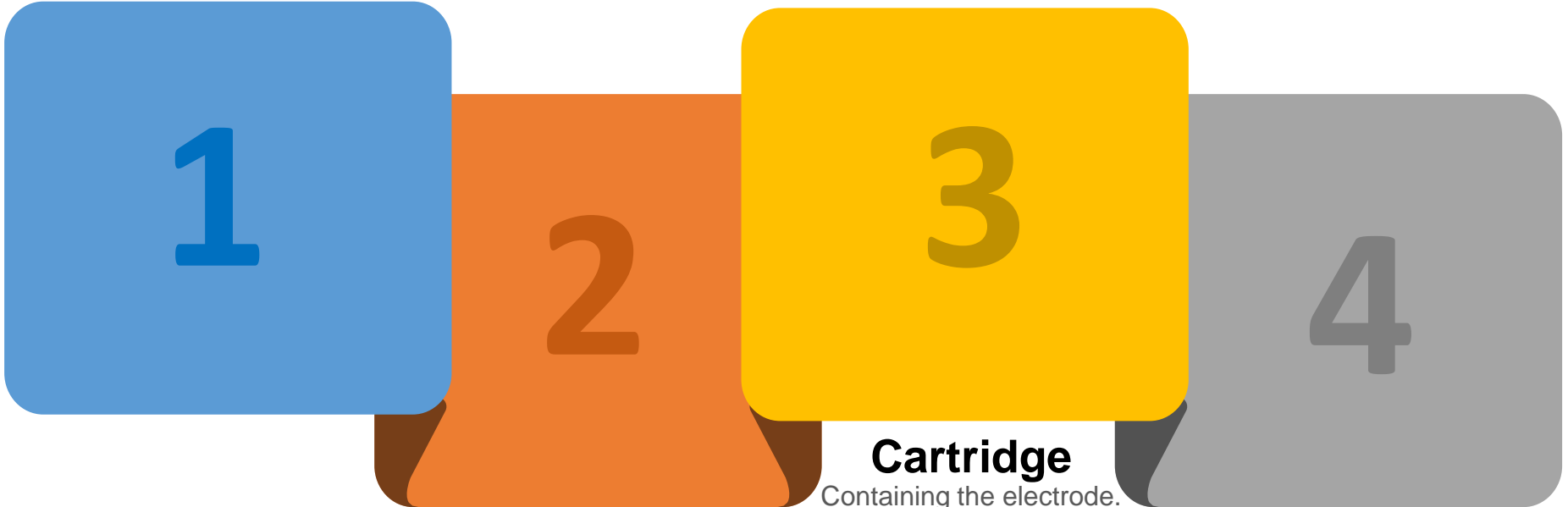


Hand held

The burden of the major diseases affecting global health can be reduced if appropriate IVD such as MagnetPlex were widely available in low-resource settings in the developed world as well as in the developing world, and therefore reducing health system cost.



# Technology review - Device components



**Transfer pipette  
Safety lancet**



**Sample holder**  
Containig magnetic  
particles and conjugated  
antibody



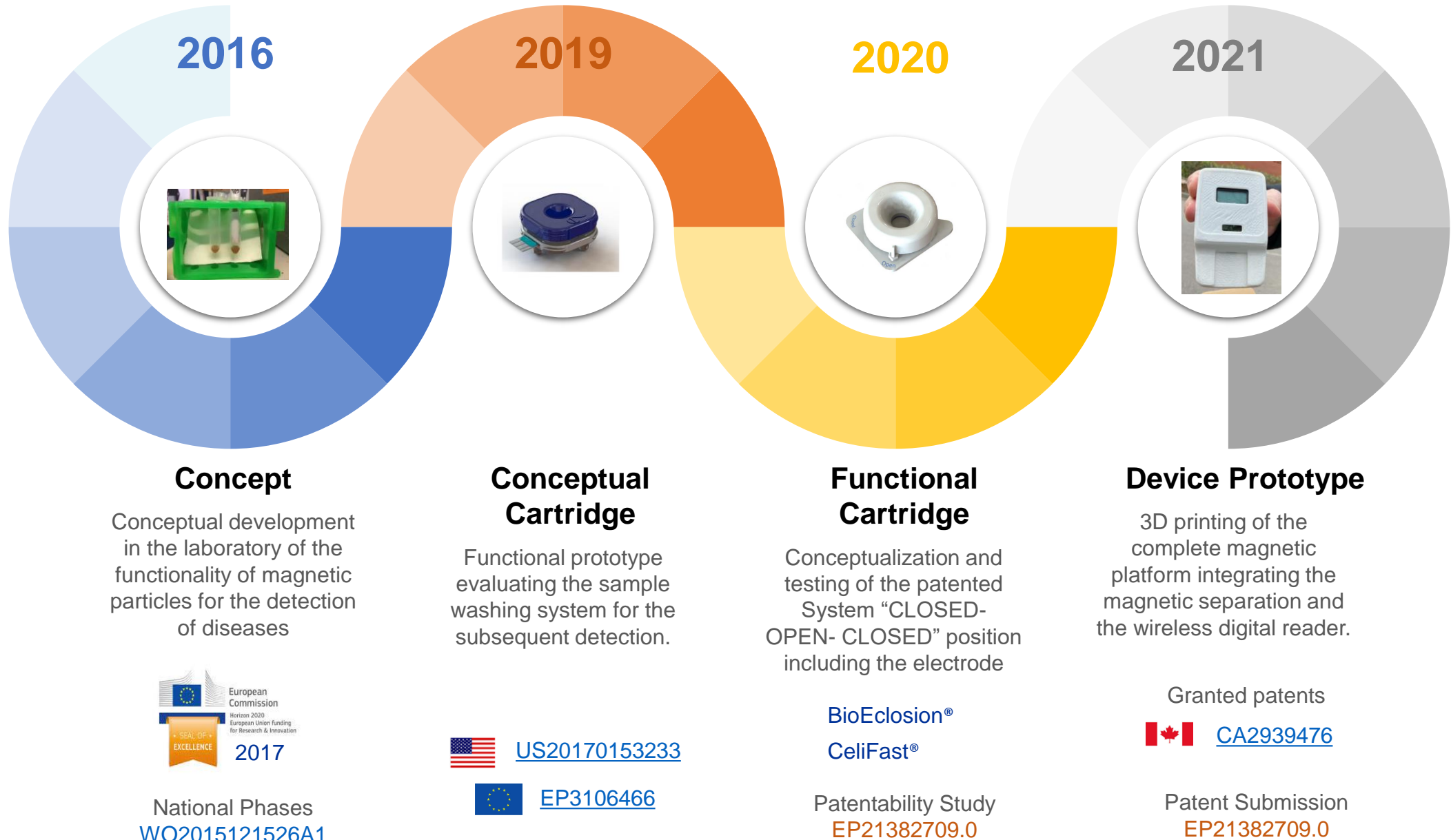
**Cartridge**  
Containing the electrode.  
CLOSED- OPEN- CLOSED  
position  
**Dropper**  
Containing the readout  
reagent



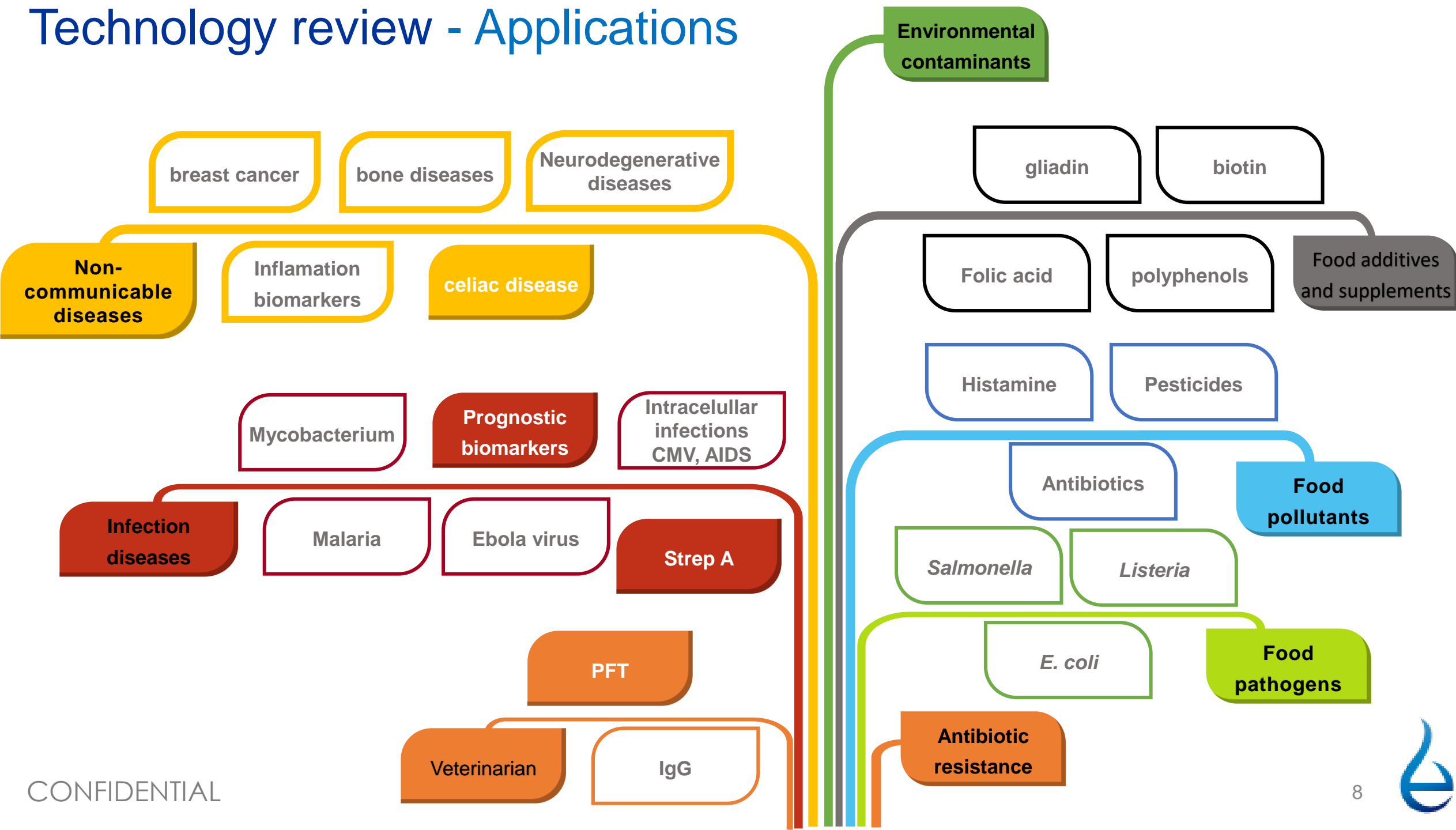
**Reader**  
Wireless connected to a  
Smart phone



# Technology review - Intellectual property evolution



# Technology review - Applications



# Business review – Market drivers

## IVD market



**\$84.5 B** (2020)

CAGR 2.6%



**\$25.9 B** (2020)

CAGR 4.7%



**\$14.47 B** (2020)

CAGR 5.1%

## Major drivers



Irruption of Global Precision Medicine Market \$57 B (2019) CAGR 11%



Increase chronic disease prevalence is expected to rise by 57% by the year 2020



New markets on emerging countries (Asia Pacific and Latin America) offer lucrative opportunities



Global Veterinarian Diagnostic Market \$3.3 B (2018) CAGR 6.4%.



Global Food Pathogen Testing Market \$7.8 B (2018) CAGR 7.8%.



The COVID-19 pandemic prompted a transformation in the infectious disease point-of-care testing (POCT) market.

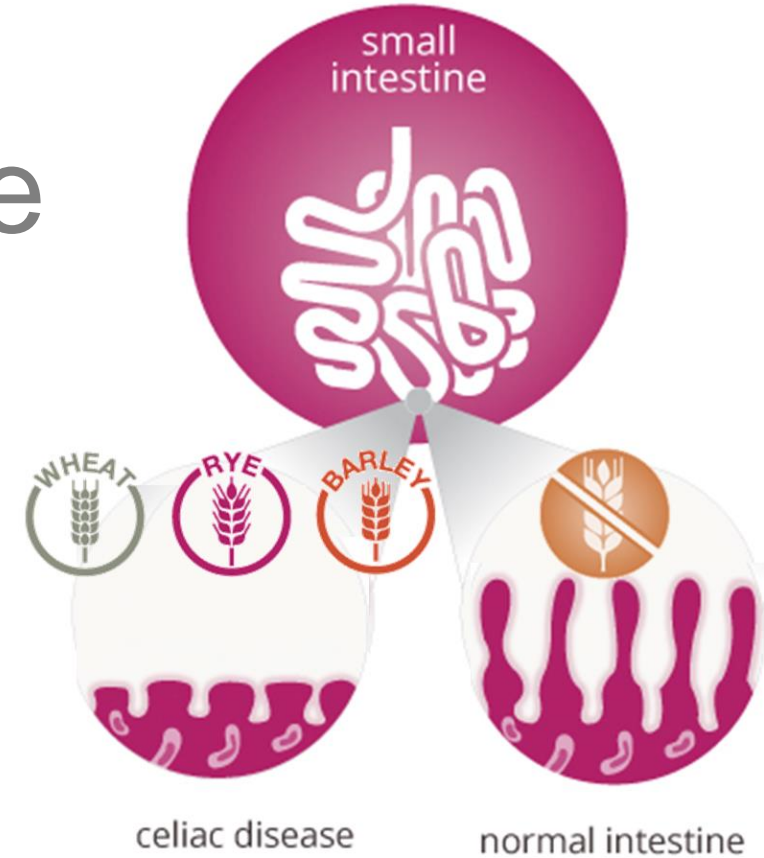


# Our first application: Celiac Disease

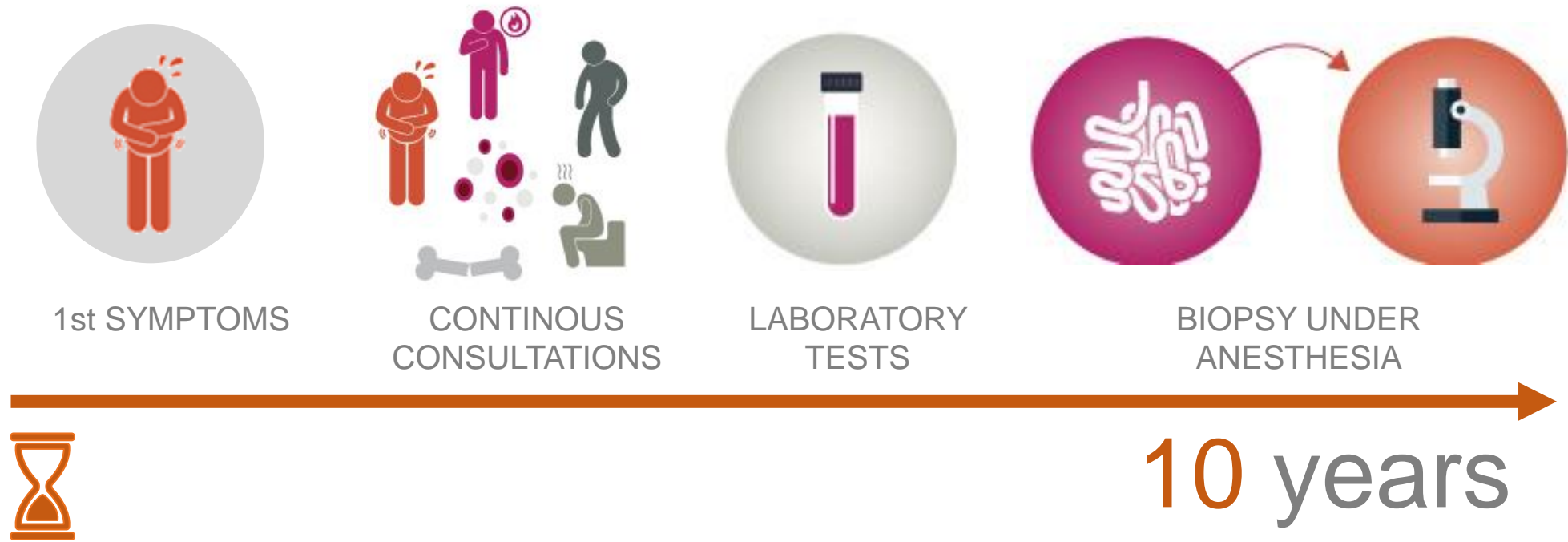
1 in 133 people worldwide

90 % misdiagnosed

Gluten free diet



# The diagnosis may take up to 10 years



300 symptoms

\$3.5 billion

# CeliFast®. Our first product



1st SYMPTOMS



CONTINUOUS  
CONSULTATIONS



LABORATORY  
TESTS



BIOPSY UNDER  
ANESTHESIA

Current  
diagnosis



1st SYMPTOMS



FINGERSTICK

CeliFast



## FEATURES

- 3-step procedure
- 10-min results
- Whole blood, serum or plasma specimens
- Up to 24-month shelf-life at Room Temperature
- Disposable, single-use
- No refrigeration required
- Built-in procedural and reagent control line
- Standardized procedure across all products



# CeliFast®. 3-step procedure

## Class B Rapid Test for Celiac Disease



### APP

Point of need  
Rapid  
Quantitative  
High Predictive Value  
User-friendly



Data collection

100% preliminary predictive value


















EU, Canada & US patent granted\*

(\*)  US20170153233  EP3106466  CA2939476

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# CeliFast® improves the current diagnosis procedure

	CeliFast	Lab test	Rapid test
 Point of need			
 Quantitative Lab Results			
 Drop of blood			
 10-minutes			
 High accuracy			
 Android App			

Data extracted from company websites

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# Celiac Disease market

## Major Drivers

TAM



**\$3.5 B**  
**180 M patients**

SOM



**\$1.0 B**  
**26 M patients**

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Global IVD market  
\$84.5 B (2020) CAGR 2.6%



Autoimmune Disease Diagnosis Market  
\$4.1 B (2020) CAGR 8.9%



Celiac Disease (CD) 7MM market  
\$1,2 B (2017)



Tissue Transglutaminase (Ttg) Test Market  
CAGR 17,5% (2023)



New Drugs delivered 2021 – 2023  
CAGR 16,6% (2020)



Gluten-free products  
\$21.61 B (2019) CAGR 9.2%



# Main revenue stream – B2B

## Costs



**5.34 €/test**

estimated at 100.000units



**230€**

free-of-charge

## Price distributor

B2B



**20€/test**

Health application



## Customer



Private Practitioner



Insurance Company



Pharmacies



Public Health System



**30-40€/test**

Health application

## End-user



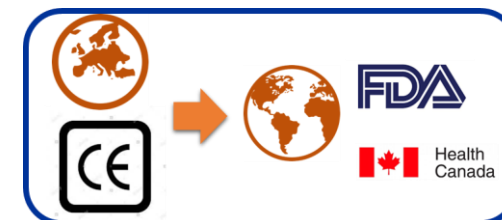
**50-60€/test**

Health application

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Replicate to **new applications**



# Financial projections

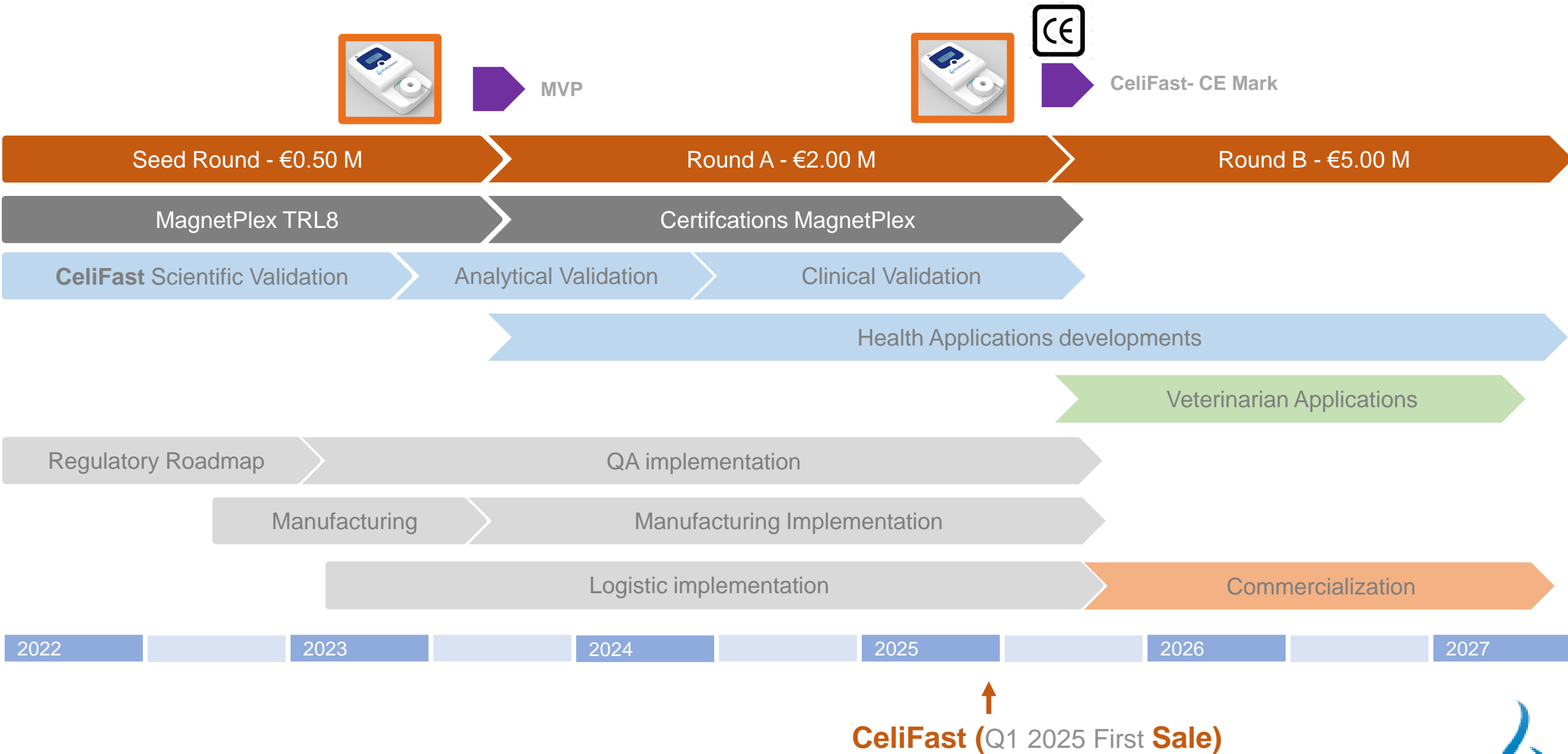


	2021	2022	2023	2024	2025	2026	2027	2028
# Number of tests	-	-	-	-	65,813	233,211	458,902	784,281
Incomes Tests (k€)	-	-	-	-	948	4.396	8.265	13.833
Costs (k€)	71	232	1.067	1,256	3.978	5.111	6.831	8,,992
Revenue (k€)	(55)	355	132	93	169	1.085	1.433	4.841
# FTE	-	3	4	5	8	12	13	16
Dilutive Investment (k€)	-	500	750	1.250	3.200	1.800	-	-

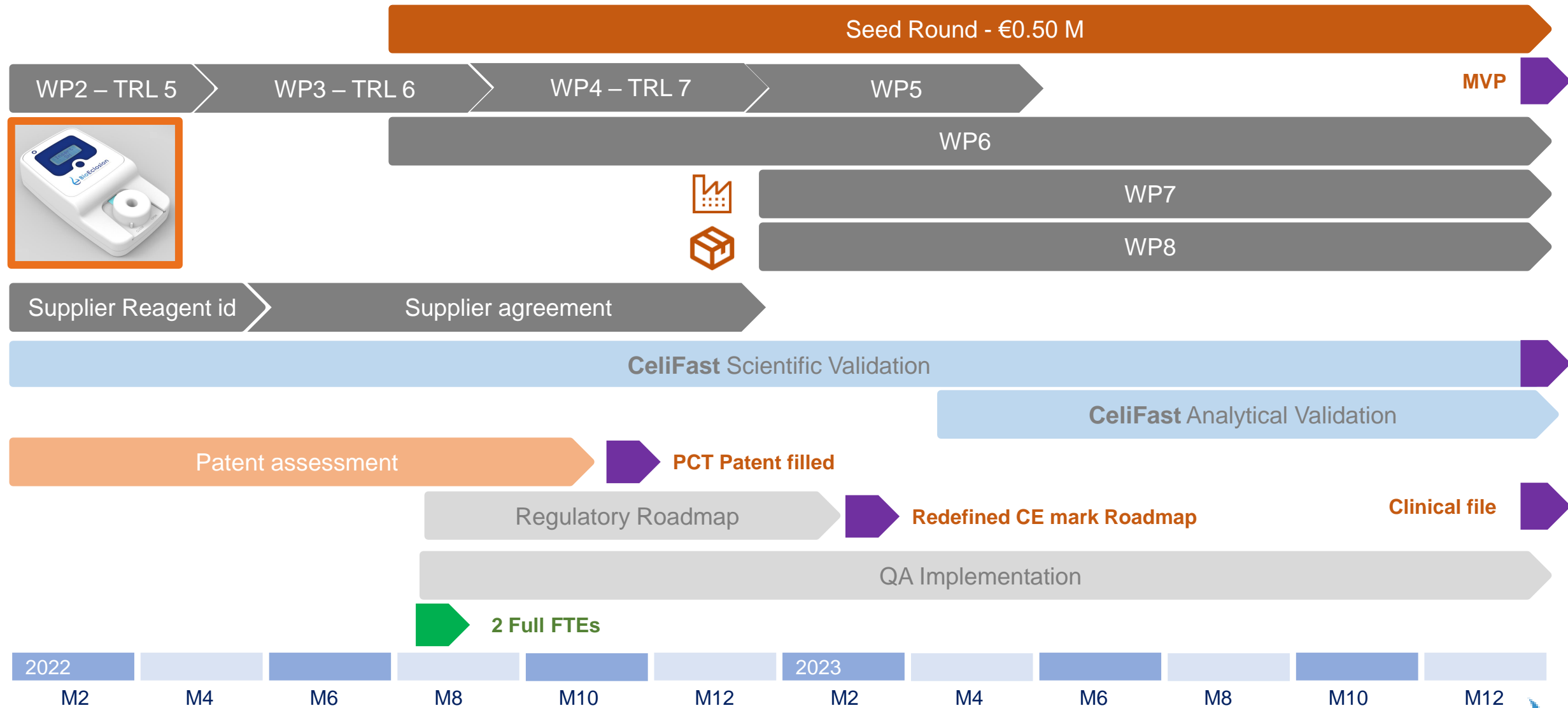
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# Project management – Global Roadmap



# Project management – Phase 1 roadmap



WP2: Initial engineering of key Systems (TRL 5)

WP3: Development of key systems (TRL 6)

WP4: Engineering Refining (TRL 7)

WP5: Prototyping Manufacturing

WP6: Software Development

WP7: Manufacturing design (TRL 8)

WP8: Packaging Design

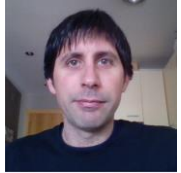
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# Who we are...

## Key Profiles



**Jofre Ferrer-Dalmau (CEO)** 

- ✓ PhD in Biomedicine
- ✓ MBA by EAE
- ✓ 6+ year experience in CRO



**Prof. María Isabel Pividori (CSO)**  

- ✓ Professor at UAB
- ✓ +110 scientific publications
- ✓ 3 patents
- ✓ 10 supervised PhD tesis
- ✓ Leading 10 projects as PI



**Financial & Strategic advisors**



**Collaborators**



## Key Subcontracted services

Product development



IP management



R&D Development



Regulatory services



Cap table

Isabel Pividori **35%**  
Jofre Ferrer **35%**  
Addenda **15%**  
UAB **10%**  
Júlia Ferrer **5%**



# Key team – Track record

## Programs



BioEcllosion SL

## Funds



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# Enhancing Rapid Tests for Worldwide Diagnostics



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