

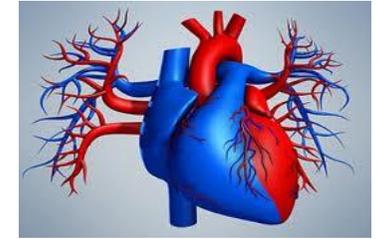


Francesco Faita

*medical devices for **early** detection of **cardiovascular risk***

## CARDIOVASCULAR DISEASE

- Kills more than accidents, AIDS and cancer together
- Is one of the main cause driving healthcare costs



### DON'T RELY ON RISK FACTORS!



**Jim Fixx**  
Famous US Marathoner

- Not Overweight
- Very Fit
- Non-Smoker

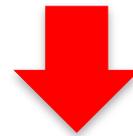
**DIED OF A MASSIVE HEART  
ATTACK AT AGE 52**



**Winston Churchill**  
Prime Minister during WWII

- Overweight
- Not Fit
- Heavy Smoker

**LIVED TO AGE 89**



classical risk factors give us information too late:  
they are not enough to prevent effectively CV disease!

**PRODUCT 1/2**  
**FMD Studio**  
**Carotid Studio**

**ARTERIAL THICKNESS**

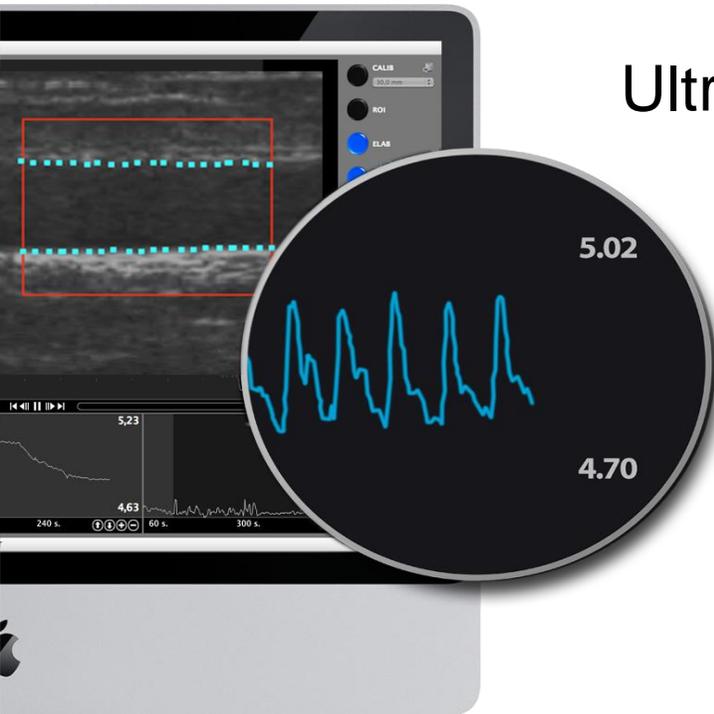
**ENDOTHELIAL FUNCION**

**ARTERIAL STIFFNESS**

**PRODUCT 3**  
**Pulse Wave Studio**

## *Software Device*

Ultrasound image analysis

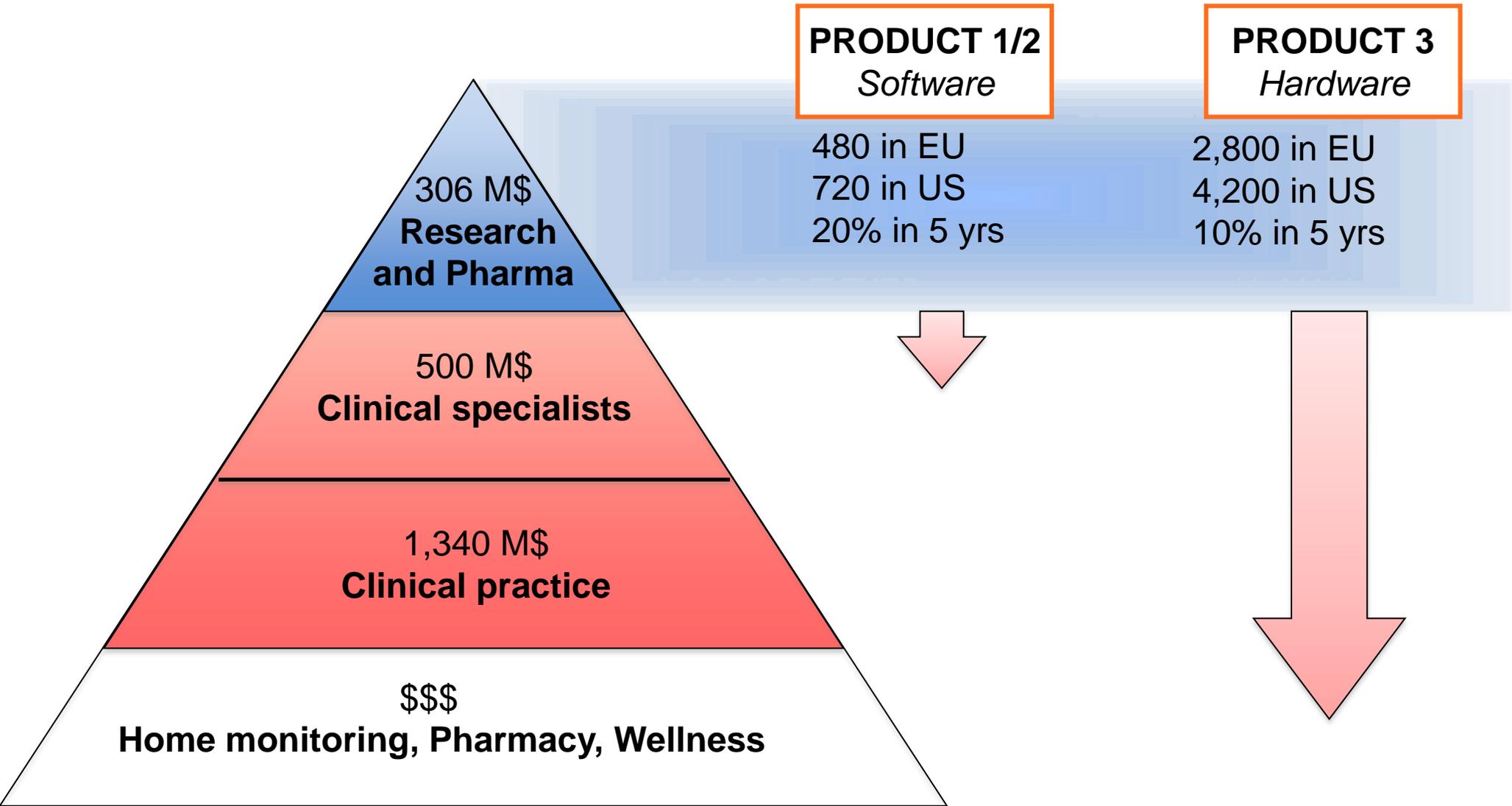


## *Hardware Device*

Non-invasive sensor



**Early and customized** assessment of cardiovascular



Font: RB Milestone Group, LLC

## MANAGEMENT



Elisabetta Bianchini  
M.Eng  
VP R&D, Regulations

Vincenzo Gemignani  
M.Eng  
CEO

Francesco Faita  
M.Eng  
VP R&D, Product Development

Edoardo Pagnini  
Marketing & Sales

## SCIENTIFIC ADVISORY BOARD



Rosa Sicari,  
MD, PhD



Lorenzo Ghiadoni  
MD, PhD

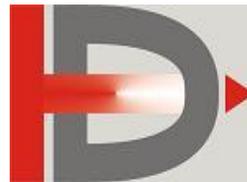
**European Society of Echocardiography  
and European Society of Cardiology**

**American Heart  
Association**

## Current Customers



UniversitätsSpital  
Zürich



## Current Partners



UNIVERSITÀ DI PISA







- **Commercial network with International Distributors**
- **Industrial partnership**

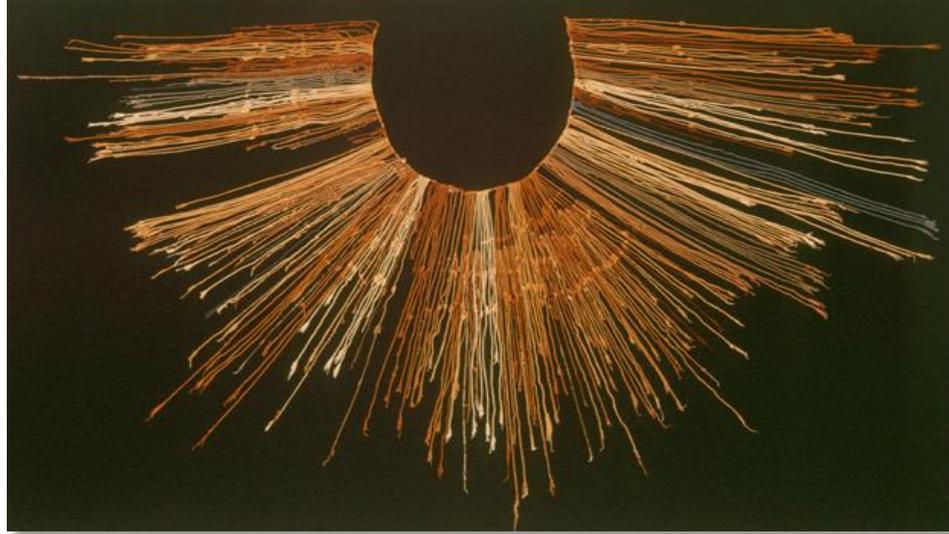


- **Clinical studies**
- **Guidelines and reference values**



- **Quality & Certifications**
- **Customer's support & training**





*Quipus (which means "knots") were recording devices used in the Inca Empire Andean region to track important events and time and to predict the future.*

**THANK YOU  
FOR YOUR ATTENTION**



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Francesco Faita

[www.quipu.eu](http://www.quipu.eu)

*early detection of your **cardiovascular risk***



- ◆ Easy to use
- ◆ Competitive pricing
- ◆ New technology
- ◆ Integration
- ◆ High reliability and accuracy
- ◆ Exercise analysis

	Quipu	MIA	AtCor	Alam	DiaTec
Precision	😊😊😊	😐😐	😊😊😊	😐😐	😐😐
Real-Time	😊😊😊	😞	😊😊😊	😊😊😊	😊😊😊
Easy-to-use	😊😊😊	😐😐	😞	😞	😞
Integration	😊😊😊	😐😐	😞	😞	😞
Cost	😐😐	😞	😞	😐😐	😊😊😊

😊😊😊 = excellent    😐😐 = sufficient    😞 = marginal

**Most of QUIPU competitors are single-product based companies addressing international market**

**NUMBERS:**

- 17.796 pharmacies in IT
- 141.582 pharmacies in EU

**CULTURAL TREND:**

- Developing Pharmacy-Based POCT (Point of Care) Services (example: in Italy Dlgs 156/2009)

**MARKET SIZE:**

- Point of Care Diagnostic: US\$ 13.7 B in 2010 worldwide, rose by 7%, driven by demand for cardiovascular testing products (data source: Espicom Business Intelligence, UK)



**PULSE WAVE PHARMACY:** self-measurement tool (DEVICE + SENSORS) for wide population measurement of local carotid elasticity



### Completed

- Italian multicenter trial for FMD reproducibility evaluation (7 units, 150 subjects)
- International multicenter trial for IMT “reference values” definition (24 units, 24.871 subjects)
- Arterial elasticity evaluation in atherosclerotic rabbits
- Heart failure in pig model
- CArE: reproducibility and physiology of carotid distensibility in exercise (60 subjects)
- FMD/IMT/DISTENSIBILITY: agreement with gold-standard techniques

### To be completed

- International multicenter trial for carotid distensibility “reference values” definition (24 units, 24.871 subjects)
- Electrophysiology lab: cardiac activity timing assessment for pace-maker setup
- Mechanical alteration in vascular stenting sheep

### Future

- Cardiac alteration in different phases of exercise (sport medicine)
- Cardiac alteration in sleep disorder
- PWV Studio agreement with gold-standard techniques

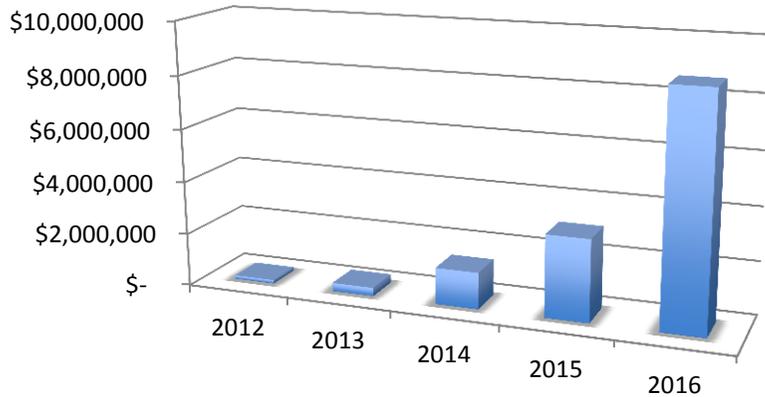
	2011	2012	2013	2014	2015	2016
FMD/Carotid Studio volume	5	15	30	60	90	150
Pulse Wave Studio volume	0	0	5	50	100	200
Pulse Wave Pharmacy volume	0	0	0	200	1000	5000
<b>TOTAL</b>	<b>5</b>	<b>15</b>	<b>35</b>	<b>310</b>	<b>1190</b>	<b>5350</b>

FMD/Carotid Studio price	€8.000	€9.000	€9.000	€12.000	€12.000	€15.000
Pulse Wave Studio price	€-	€-	€10.000	€10.000	€12.000	€12.000
Pulse Wave Pharmacy price	€-	€-		€800	€800	€800

FMD/Carotid Studio revenue	€40.000	€135.000	€270.000	€720.000	€1.080.000	€2.250.000
R&D Engineer	1	2	2	3	4	5
Commercial Engineer	0,5	€1	€50.000	€500.000	€1.200.000	€2.400.000
Production/service Technician	0	€0	€1	€160.000	€800.000	€4.000.000
Accountant/Secretary	0,2	0,4	0,4	1	2	2
<b>TOTAL</b>	<b>€40.000</b>	<b>€ 135.000</b>	<b>€ 320.000</b>	<b>€ 1.380.000</b>	<b>€ 3.080.000</b>	<b>€ 8.650.000</b>

## • FORECAST

### REVENUE LEVELS



## Needed equity

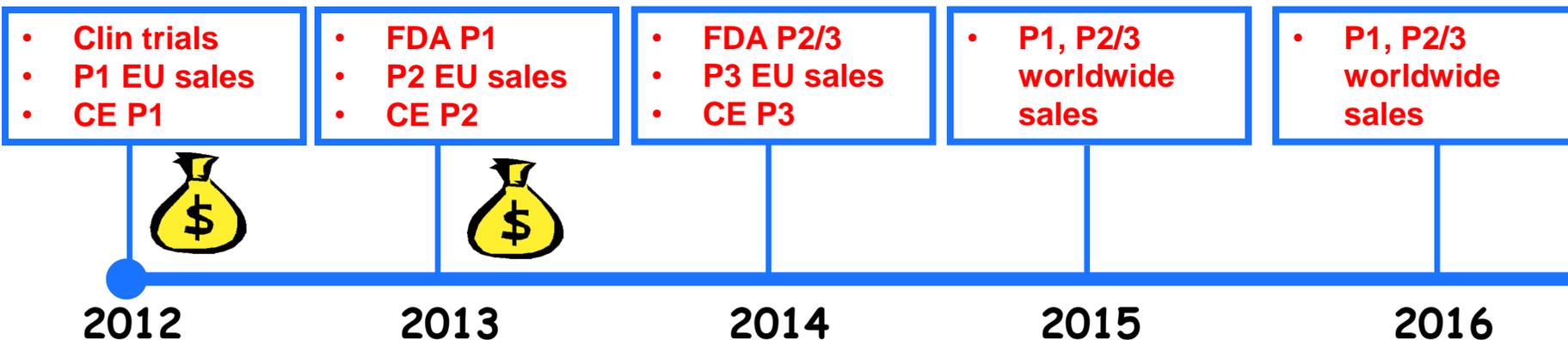
1. € 750k for the first year (R&D and certification process and to get the first customers)
1. € 750k for the second year (to strongly support the promotion)

Gross margin = 55%

## • MILESTONES

P1 = product 1  
P2/3 = product 2 and 3

CE= European Conformity approval  
FDA = Food&Drug Administration approval



Cash Flow statement	2012	2013	2014	2015	2016
<b>Beginning CASH</b>	€-	€397.475	€527.475	€239.175	€328.095
<b>Cash In</b>					
Equity	€750.000	€750.000	€-	€-	€-
Loan	€-	€-	€-	€-	€-
Boot strap	€20.000	€-	€-	€-	€-
Friends/family	€-	€-	€-	€-	€-
Other	€-	€-	€-	€-	€-
Systems 1 revenue	€135.000	€270.000	€720.000	€1.080.000	€2.250.000
Systems 2 revenue	€-	€50.000	€500.000	€1.200.000	€2.400.000
Systems 3 revenue	€-	€-	€160.000	€800.000	€4.000.000
<b>Total Cash IN</b>	€905.000	€1.070.000	€1.380.000	€3.080.000	€8.650.000
<b>Cash out</b>					
COGS - Systems 1	€40.500	€81.000	€216.000	€324.000	€675.000
COGS - Systems 2	€-	€22.500	€225.000	€540.000	€1.080.000
COGS - Systems 3	€-	€-	€72.000	€360.000	€1.800.000
Other (ex Outsourcing)	€6.750	€16.000	€69.000	€154.000	€432.500
<b>Total COGS</b>	€47.250	€119.500	€582.000	€1.378.000	€3.987.500
<b>Expense items</b>					
Sales	€58.750	€120.000	€173.000	€310.000	€692.500

## Customers

## MDs

- First phase: researchers and innovators
- Second phase: clinical market (i.e. clinical specialists and clinical practice)

## Countries

- EU
- USA
- World

## Pricing

Products sold separately

- Product 1 (SW): **\$10K**
- Product 2 (SW+HD): **\$12K**
- Product 3 (SW+HD): **\$8K**



Integrated solution  
10% discount



Several scientific studies show the value of these early parameters in improving cardiovascular diagnosis.

Example:

### Which markers of subclinical organ damage to measure in individuals with high normal blood pressure?

Thomas Sehested<sup>a,b</sup>, Jørgen Jeppesen<sup>a,c</sup>, Tine W. Hansen<sup>b,d</sup>,  
Susanne Rasmussen<sup>e</sup>, Kristian Wachtell<sup>f</sup>, Hans Ibsen<sup>g</sup>,  
Christian Torp-Pedersen<sup>c,h</sup> and Michael H. Olsen<sup>a,c</sup>

Journal of Hypertension 2009, 27:1165–1171



### Methods:

▪ early parameters were measured in 1968 individuals, aged 40 to 70 years, with normal blood pressure and without manifest cardiovascular disease or medications

▪ follow-up of 12.8 years

### Results:

▪ in healthy individuals with high normal blood pressure, measuring at least two of early parameters was sufficient to significantly improve risk prediction.