

Accelerating Health Tech

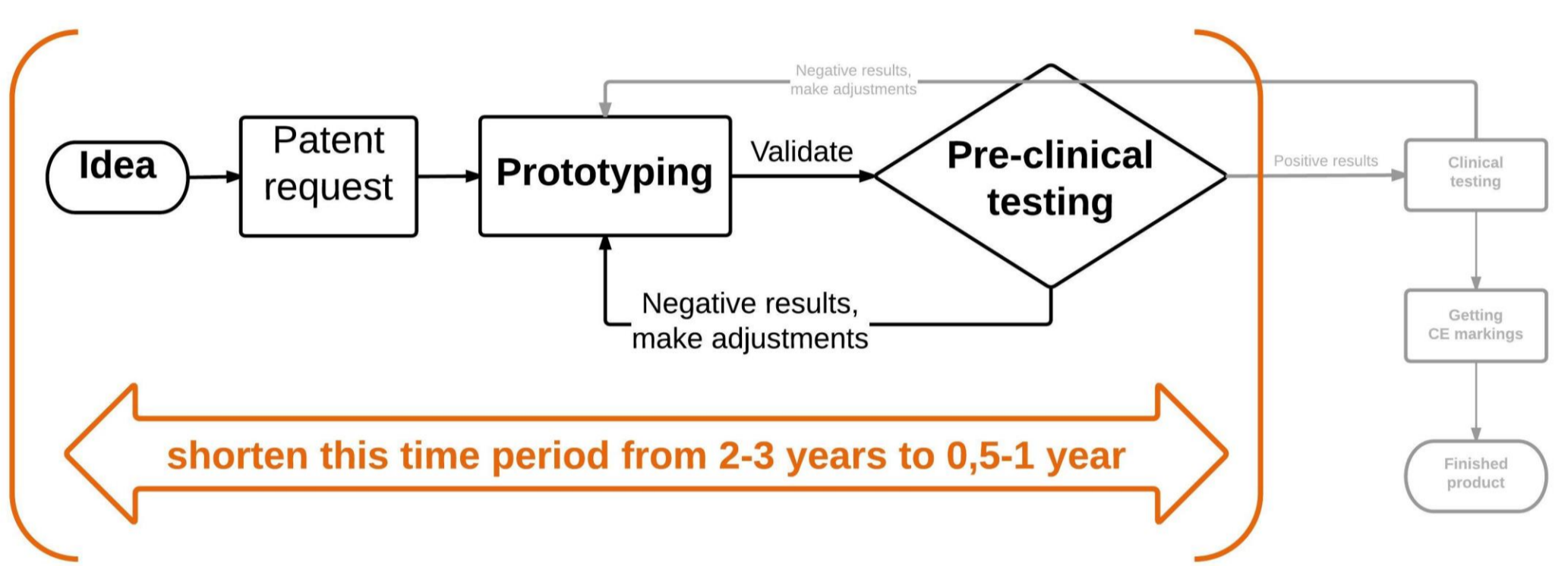
Bram Oosterbos

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Introduction

The goal of this masters thesis is to accelerate the technology within the healthcare sector. This can be done by shortening the time period from idea to clinical testing. These days it takes two or three years to make a working prototype ready for clinical testing. But we think it could be possible to do this within 1 year when you have access to the proper tools and information to do so. And that is what this masters' thesis provides.



Patent request

Request your patent before you start prototyping so you do not interfere with the licenses of the open source hardware.

Mobile prototyping

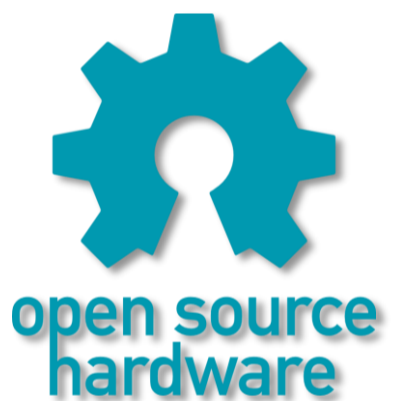
- Make apps fast and easy
- Limited android knowledge
- Drag and drop process

Picture	Name	Type	Purpose	Computing	Clock speed (MHz)	Digital I/O	Analog I/O
	Raspberry Pi model B+	Single-board computer	High-end, Stand-alone	ARM1176JZF-S Core ARM®11	700	40	0
	Raspberry Pi model B	Single-board computer	High-end, Stand-alone	ARM1176JZF-S Core ARM®11	700	28	0
	Beaglebone Black	Single-board computer	High-end, Stand-alone	AM335x ARM® Cortex-A8	1000	85	7
	Banana Pi	Single-board computer	High-end, Stand-alone	Dual Core ARM® Cortex-A7	1000	28	0
	Arduino Uno	microcontroller board	Stand-alone	ATmega328	16	14	6

Hardware prototyping

Advantages of Open Source:

- Faster and easier development
- Less expensive process and product
- A lot of support and examples
- Wide overall compatibility



Pre-clinical testing

This can be done faster because the development is in-house:

- No waiting time due to PCB supplier
- Rapid feedback to development team
- Close control over test results

Results

Online portal with all the information and tools needed to make a prototype or product for medical purposes:

- Tool to help you choose a board
- Example projects
- Summarized open source licenses
- Information about requesting a patent w.r.t. open source hardware

Promotoren / Copromotoren: Prof. Dr. Ir. Ronald Thoelen
Ir. Vincent Claes