Summary

Eye health care is a rapidly expanding market.

Retinal imaging requires constant technology innovation from physics and computer science.
Who, why, what and how?

Who?

Growing Geographically
Leveraging Direct & Indirect Channels

Optos revenue 2012 $196.4m $25.9m

Optos profits 2012 +$3.1m +37% from 2011 +$0.8m +3%

Sunday, 3 March 13
What?


Sunday, 3 March 13

Why?

Diabetic retinopathy incidence in +40 year-old diabetics in the US is 28.5±4% [1].

The cost of diabetic retinopathy to the US is approximately $500 million annually [2].

The demand for eye-care services in The Netherlands will increase by 200–300% between 2010 and 2020 [3].


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Why?

Normal vision

Diabetic retinopathy

Age-related macular degeneration

Retinal detachment

How?
How?

GREEN

RED

G+R

Fluorescein angiography
Why?

Normal vision
Diabetic retinopathy
Age-related macular degeneration
Retinal detachment

Sunday, 3 March 13

Why?

Diabetic retinopathy
Age-related macular degeneration
Retinal detachment

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Why?

Age-related macular degeneration

Retinal detachment

Sunday, 3 March 13
Why?

Sunday, 3 March 13

How?

Optos®
Optos ADVANCE™
Daytona

Sunday, 3 March 13
In 1891, Gerloff published a low-magnification retinal photograph that was much clearer than earlier efforts. (Reproduced from O Gerloff. Ueber die Photographie des Augenhintergrundes. Klin Monatf Augenheil 1891;29:397.)

Dimmer "electrified the 9th International Congress (1899) with his marvelous apparatus. His apparatus revolutionized ophthalmic photography techniques (Figure 1-6).

Accurate, high-quality fundus photography began at the turn of the 20th century. This was fine for examinations in a fixed location such as an ophthalmic hospital, but for domiciliary visits the por-}

2004...

[Image with text and diagrams]

2007...

[Image with text and diagrams]

Figure 1. A typical bedside indirect ophthalmoscopy examination drawing.

The present gold standard for ROP screening is binocular indirect ophthalmoscopy by an ophthalmologist experienced in the sequential changes of ROP. This recommendation comes from the Policy Statement on ROP screening from the AAO, the Section on Ophthalmology from the American Academy of Pediatrics, and the American Association for Pediatric Ophthalmology and Strabismus. ...
Clinical pathways

Diagnosis of OHT, suspected COAG and COAG

- IOP
- Optic nerve head
- Visual field

Assessment

- Normal
- Suspicious
- Normal or uncertain
- Defects

OHT

- High IOP

Suspected COAG

COAG

- Refer to consultant ophthalmologist


While we could have...

The test, pioneered by experts at the University of Edinburgh, will look at 1,000 patients with suspected heart disease. The study will prove whether scans can detect signs of heart disease, which can be difficult to diagnose.

Researchers will use specialist equipment on loan from Optos – an eye care company based in Dunfermline, Fife.
Challenge: medical devices market

Market clearance in the USA

- Special 510(k)
- Abbreviated 510(k)
- Traditional 510(k)
- Premarket Approval

Classes I, II, III

Class III
Average time for 510(k) submissions to clear

Average number of days to clearance:
- 2006 – 97 days
- 2007 – 110 days
- 2008 – 118 days
- 2009 – 136 days
- 2010 – 146 days
- 2011 – 138 days


And so on...
Congratulations... now the bad news

Challenge: technology itself
Spot the problem
Summary

Eye health care is a rapidly expanding market; its estimated growth is $1,097m by 2016.

Retinal imaging requires constant technology innovation from physics and computer science.

Do work with us!
Thanks for listening

Contact me at