

Digital Skills And Research Methods

BMSW4003

Tack 1

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|----------------------|-----------|--|
| 1. Petya Petrova | (2009077) | Introduction |
| Elena Ruseva | (2008341) | Background of the organization |
| 2. Teodora Nikolova | (2009133) | Challenges before introducing Modern Tehnology |
| 3. Elena Ruseva | (2008341) | Insights of Modern Tehnology introduced |
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| 5. Petya Petrova | (2009077) | Lessons drawn from the case study , Conclusion |

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Optos Technology

Introduction



(Optos Plc, 2012)

Optos Technology

Background of the Organisation

History of the Organisation

- **1990** Leif Anderson, Douglas Anderson's 5 years old son, suffers a spontaneous retinal detachment
- **1992** Optos was registered with the name Zenoplan Ltd (Ayling, 2017)
- **2015** Optos acquired by Nikon Corporation
- **2016** More than 10,000 devices installed worldwide
- **2016** Daytona Plus launched (Ayling, 2017)
- How long existing – 28 years

It is all about love, faith and hope

- **Douglas Anderson** - engineer and inventor of the world's first ultra-widefield retinal imaging system
- **Detached retina**



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Background of the Organisation

Aim and objectives

- Patient-friendly retinal imaging product
- Can face the need for better equipment to scan the full width of the retina
- Anderson says: ‘The devices we make today are the devices I intended to make from the outset. It’s just that big advances tend to take a long time. (Anderson, 2017)

Challenges before
introducing Modern Technology



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Quality & waste tame



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Client's inconvenience
Low performance



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Insights of Modern Technology

Definition Daytona plus

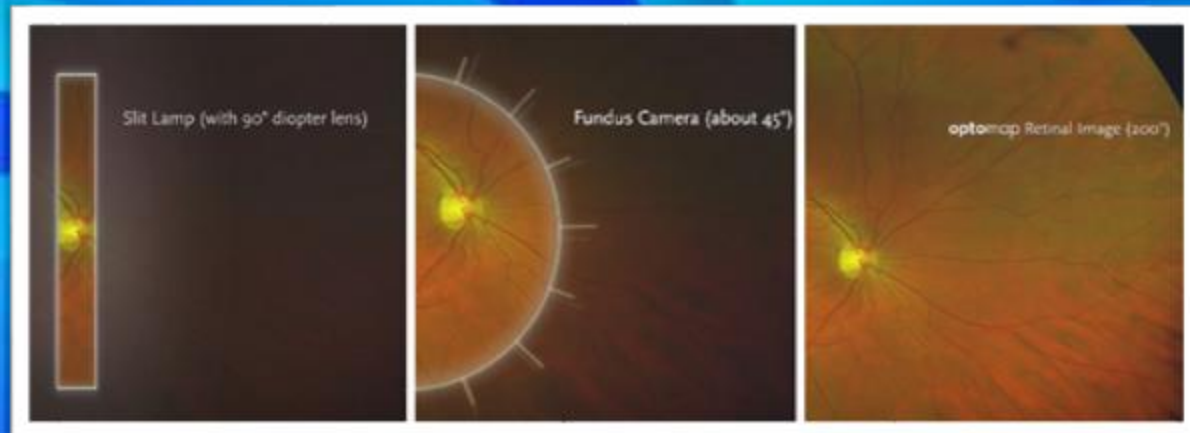
- Ultra widefield retina imaging technology
- ISmarter, Smaller, Stylish;
- Patient friendly, easy to use; (Jerome, 2019)

It is changing the way of eye care.



Optos advance

- OptosAdvance™ is browser-based image review software



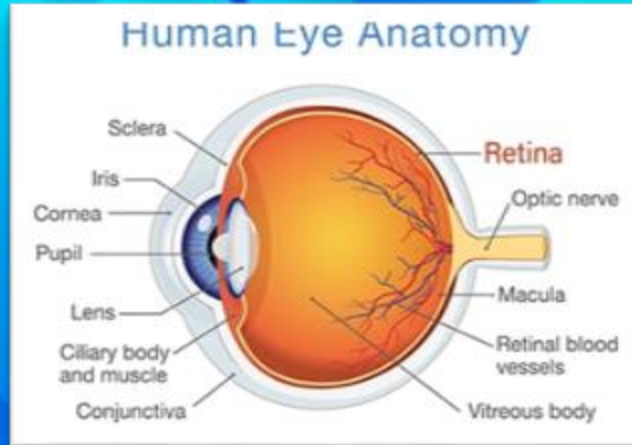
Pic 1. Traditional methods – narrow view of the retina, like flashlight in a dark room.

Pic 2. Fundus camera – 15% cover a central part only.

Pic 3. Optomat – 82% - scans the retina and transfer the scan into high resolution image displayed on the screen of the PC. (Jerome, 2019)

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Insights of Modern Technology



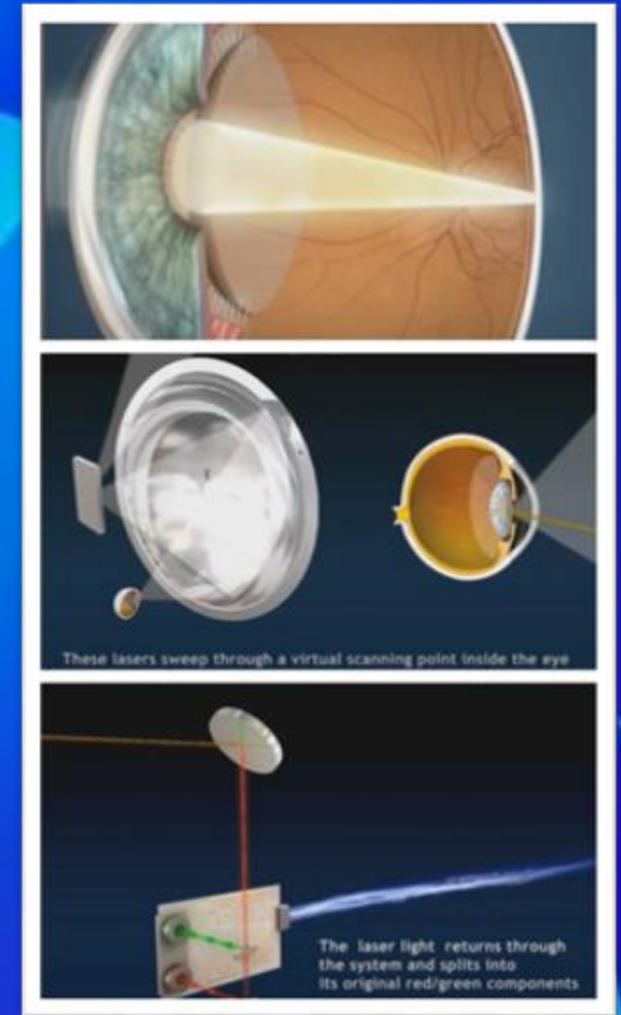
Retina - what is it?

1. Thin layer of cells lining the back of the eye.
2. 65% - inner surface
3. Converts light into impulses
4. Sent them to the optic nerve
5. Optic nerve carries these impulses to the brain (Optos, 2012)

Pic 1. Green and red lasers are projected through an optical scanning system.

Pic 2. These lasers sweep through a virtual scanning point inside the eye.

Pic 3. The laser return through the system and splits into red and green components. (Optos, 2012)

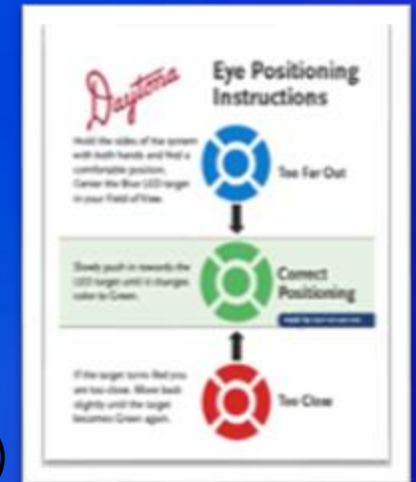


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Insights of Modern Technology

- 1.Non mydriatic.
 - 2.Painless.
 - 3.Takes less than 25 seconds.
 - 4.Ergonomic.
 - 5.Can take a picture even through very small pupils or cataract.
 - 6.Patient friendly.
 - 7.Maintain distance.
 - 8.Suitable for children.
 - 9.Suitable for everyone, for every case.
- (Optos, n.d.)

(Optos, n.d.)



Optos Technology

Insights of Modern Technology

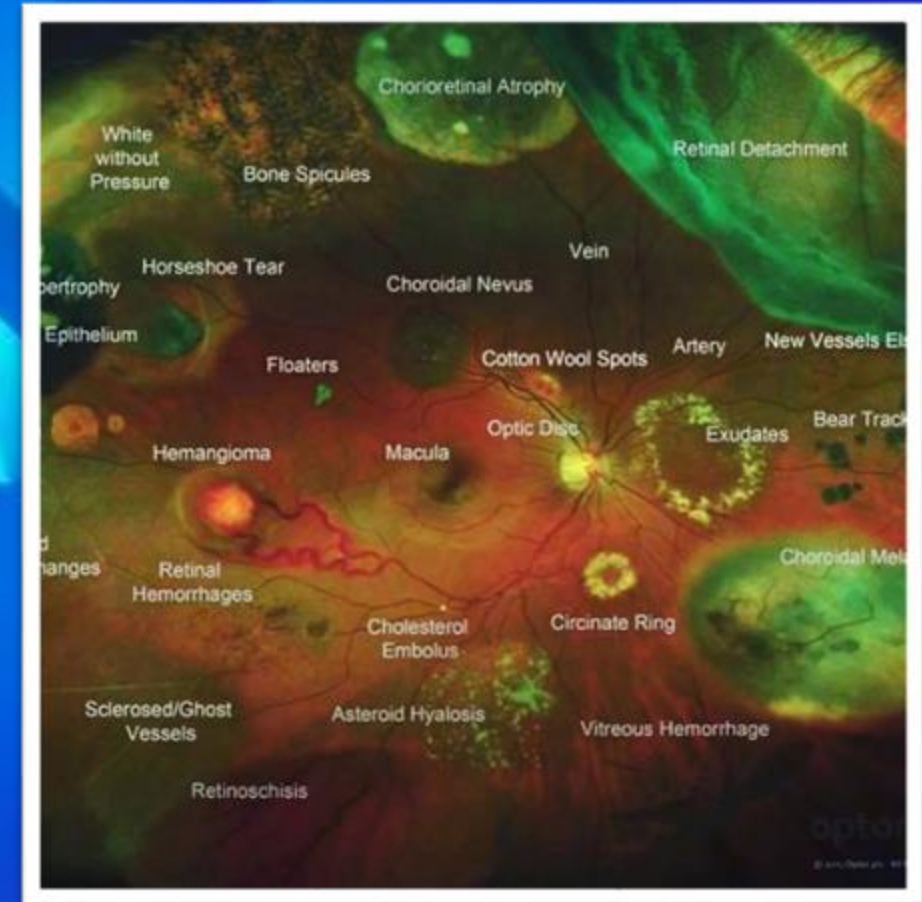
The unique Optomap ultra-widefield view helps detect early signs of retinal disease more effectively and efficiently than with traditional eye exams.

Autofluorescence pictures can define:

- Healthy;
- Diseased;
- Dead structures;

And most significant – stressed retinal cells

(Optos, 2017)



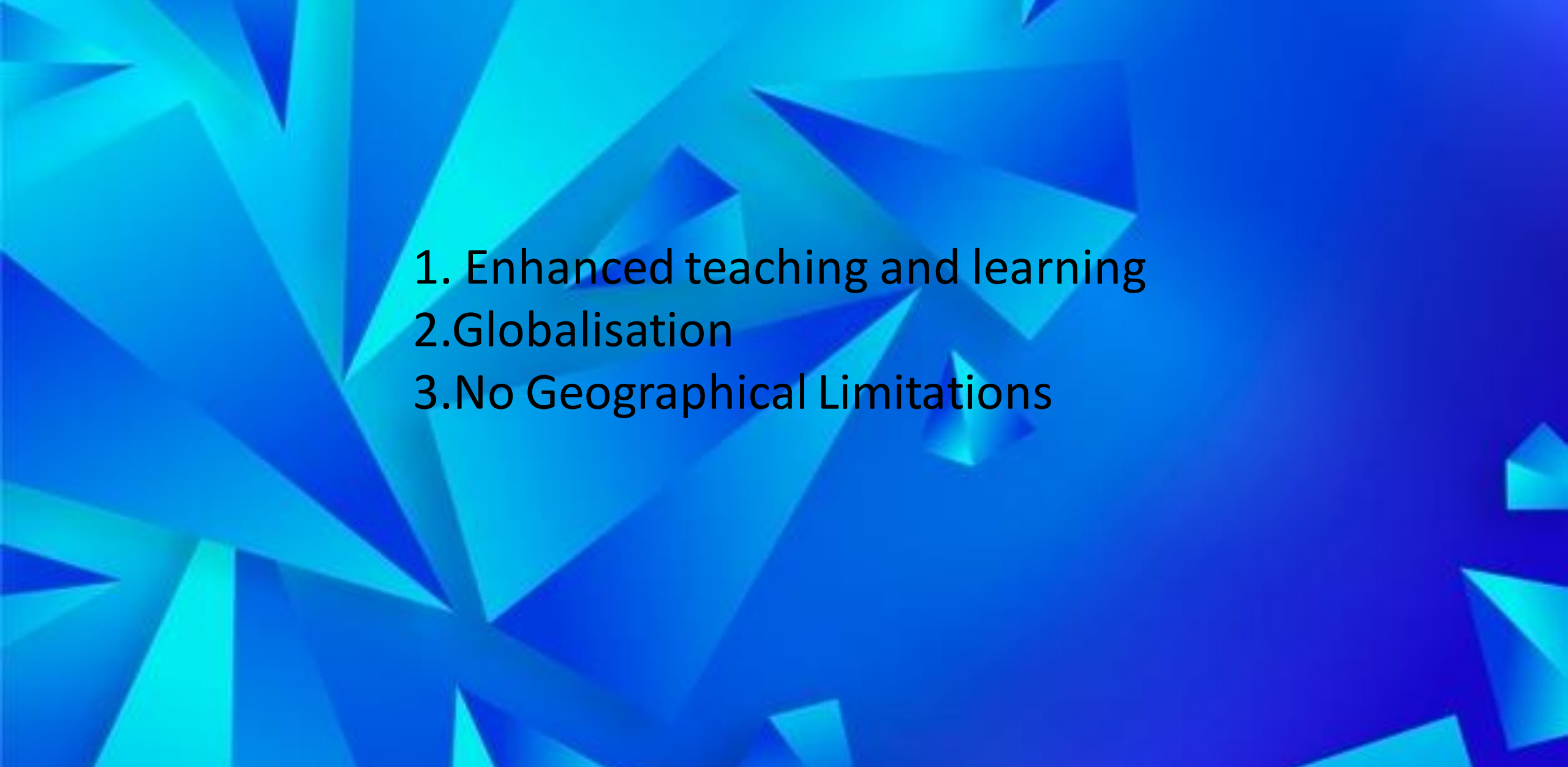
Optos Technology

Insights of Modern Technology

- Helps prevent vision loss through Technological innovation;
 - Enhances Clinical decision –making;
 - Improves practice efficiency and economics;
- Optos Advance Server
 - Central Reading Centre
 - Second opinion chance
 - Immediate access to any professional in the World.
- (Jerome, 2019)



Optos Technology

- 
1. Enhanced teaching and learning
 2. Globalisation
 3. No Geographical Limitations

Optos Technology

- 
1. Faster Time
 2. New innovative technology
 3. Improve diagnosis

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How future trends in
Technology will change the workplace

Changed other aspects of everyday life, such as
health care education, job satisfaction, and leisure
time activities.



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Lessons drawn from the case study

Petya Petrova

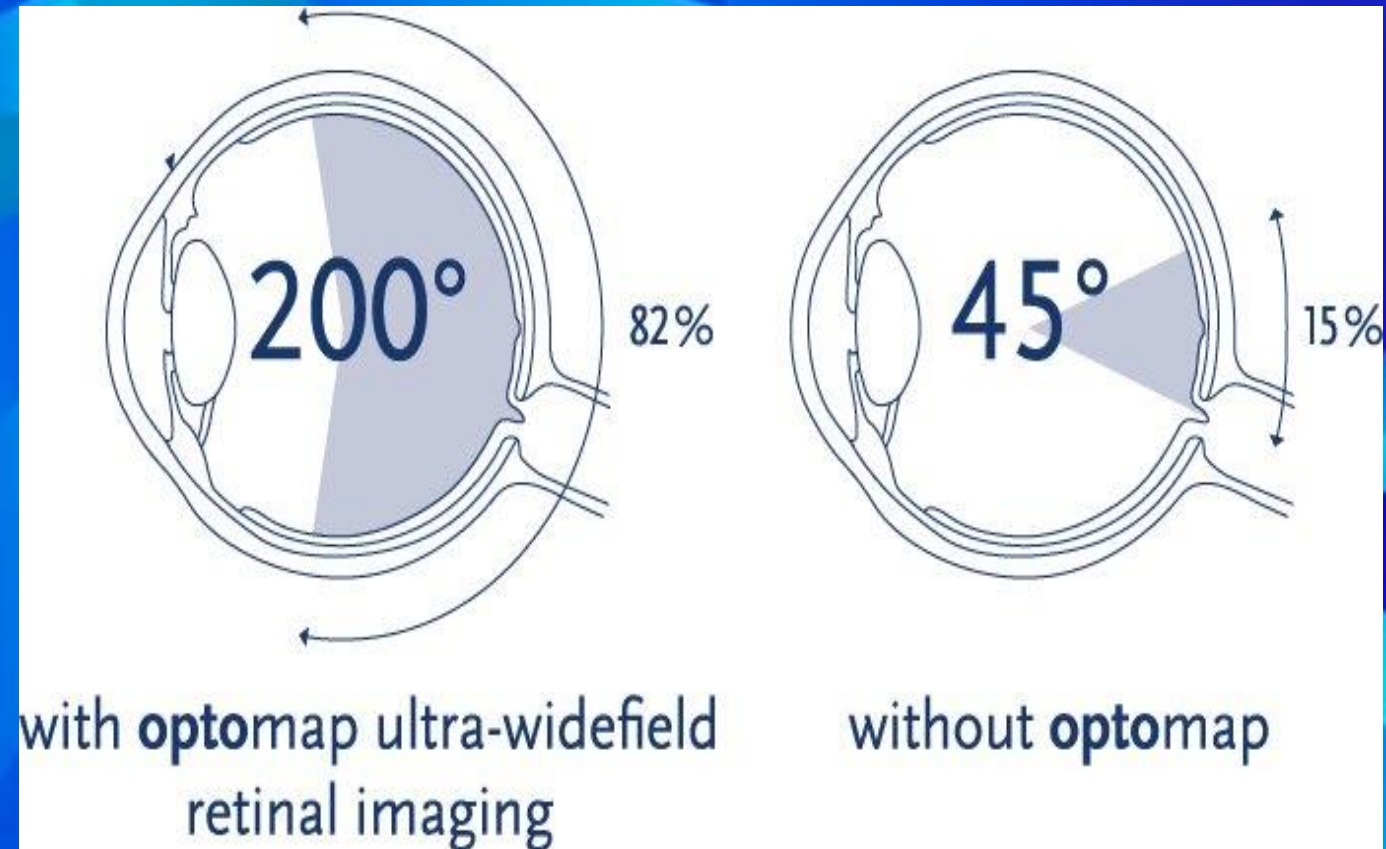
Without Optos

1. Traditional scans can only record about 15% of the retina at any one time
2. Need for Dilation
3. Speed taking a reliable image can be slow

Benefits

1. 5x more retina visible than other imaging
2. 200° degree view in 0,25s
3. Reference to compare in future
4. Assesses how cells work as well

(www.optos.com, n.d.)



(www.optos.com, n.d.)

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Why Modern Technology is important for the organization

- .Optimization of examination time
- .Economic effective
- .Easy to use

Consequences of not using Modern Technology

- .Takes long time for examination
- .Poor test results
- .Need for Dilation

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CONCLUSION



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Team work



(Gifer.com, 2020)

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Any Questions?



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