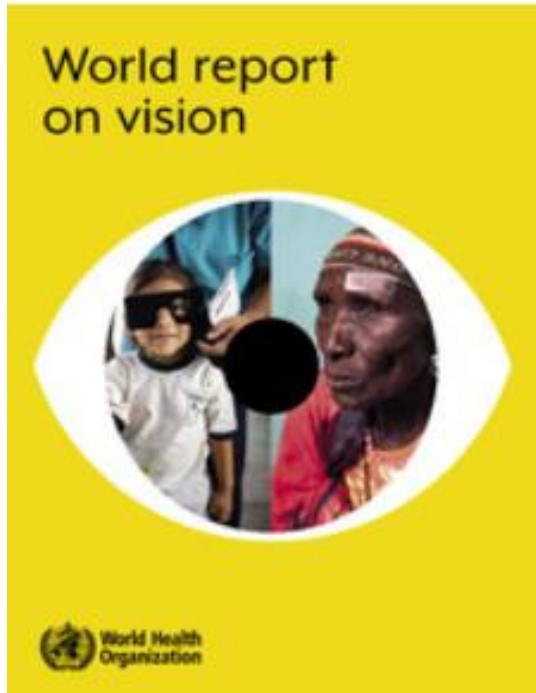VISION IMPACT
INSTITUTE

**An Overview:
The WHO World Report on Vision
&
Essilor Report on Eliminating Poor
Vision By 2050**

The Significance of these Reports

"*Both of these reports are crucial for the future of vision health as we find ourselves on the cusp of the year 2020,*" says [Kristan Gross](#)*, Global Executive Director. "This information can equip and empower advocates with a broader understanding of global vision health needs, and outline concrete actions to eliminate poor vision by 2050.*"

Why this Report?

To address the significant challenges that many countries face in delivering eye care, the report offers clear proposals building on the concerted efforts of the past thirty years.

Kristan Gross, Global Executive Director Vision Impact Institute.

"By making a simple shift in our approach, we can ensure vision takes its rightful place on the global healthcare agenda".

Key Proposal

To integrate and scale up '**people-centered eye care**', embedded in health systems and based on strong primary health care.

VISION IMPACT INSTITUTE

WHO 1st World Report on Vision

Launched: October 8, 2019 ahead of World Sight Day

Partners: The **World Health Organization** (WHO) and partners from the eye health sector, including the International Agency for the Prevention of Blindness (IAPB) and IAPB members, Sightsavers and The Fred Hollows Foundation, as well as other international organizations and individual contributors.

VISION IMPACT INSTITUTE

Key Facts – Global Magnitude

1

Vision Impairment & Blindness

Globally, **at least 2.2 billion** people have a vision impairment or blindness, of whom **at least 1 billion** have a vision impairment that could have been prevented or has yet to be addressed.

2

Severe Vision Impairment

This **1 billion** people includes those with moderate or severe distance vision impairment or blindness due to **unaddressed refractive error**, as well as near vision impairment caused by unaddressed **presbyopia**.

3

Leading Causes

Globally, the leading causes of addressable vision impairment and blindness are **uncorrected refractive errors** and **cataracts**.

4

Population in need

Eye conditions are remarkably common and on the rise. Aging is the primary risk factor for many eye conditions. The majority of people with vision impairment are **over the age of 50 years.**

5

Socio-economic Impact

Vision impairment has **serious consequences** across the life course, many of which can be mitigated by timely access to quality eye care and rehabilitation. It also poses an enormous global **financial burden due to productivity loss**.

6

Cost and Distribution

Significant **financial investments are needed** to cover the gap and to create stronger health systems, especially in low-and middle- income regions and in those with high prevalence of eye conditions and VI.

VISION IMPACT INSTITUTE

Global Magnitude of Vision Impairment

2.2Billion people live with a vision impairment

1Billion people have a vision impairment that could have been prevented or has yet to be addressed.

826 Million suffer from unaddressed Presbyopia

123.7 Million unaddressed Refractive Error

65.2 Million Cataract Surgeries
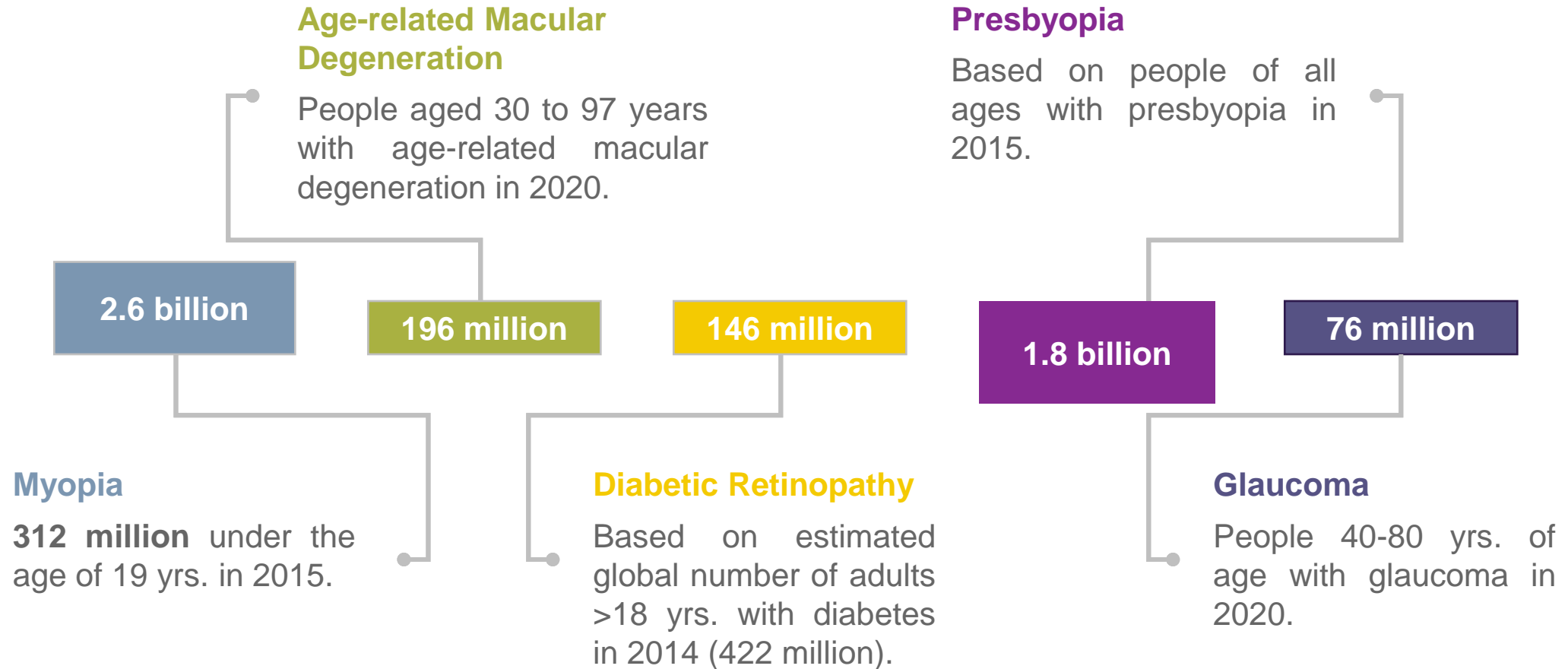
6.9 Million Glaucoma

4.2 Million Corneal Opacities

3 Million Diabetic Retinopathy

2 Million Trachoma

Global Estimates of People affected by <u>Eye Conditions</u>

Age-related Macular Degeneration

People aged 30 to 97 years with age-related macular degeneration in 2020.

Presbyopia

Based on people of all ages with presbyopia in 2015.

| 2.6 billion |
| 196 million |
| 146 million |
| 1.8 billion |
| 76 million |

Myopia

312 million under the age of 19 yrs. in 2015.

Diabetic Retinopathy

Based on estimated global number of adults >18 yrs. with diabetes in 2014 (422 million).

Glaucoma

People 40-80 yrs. of age with glaucoma in 2020.
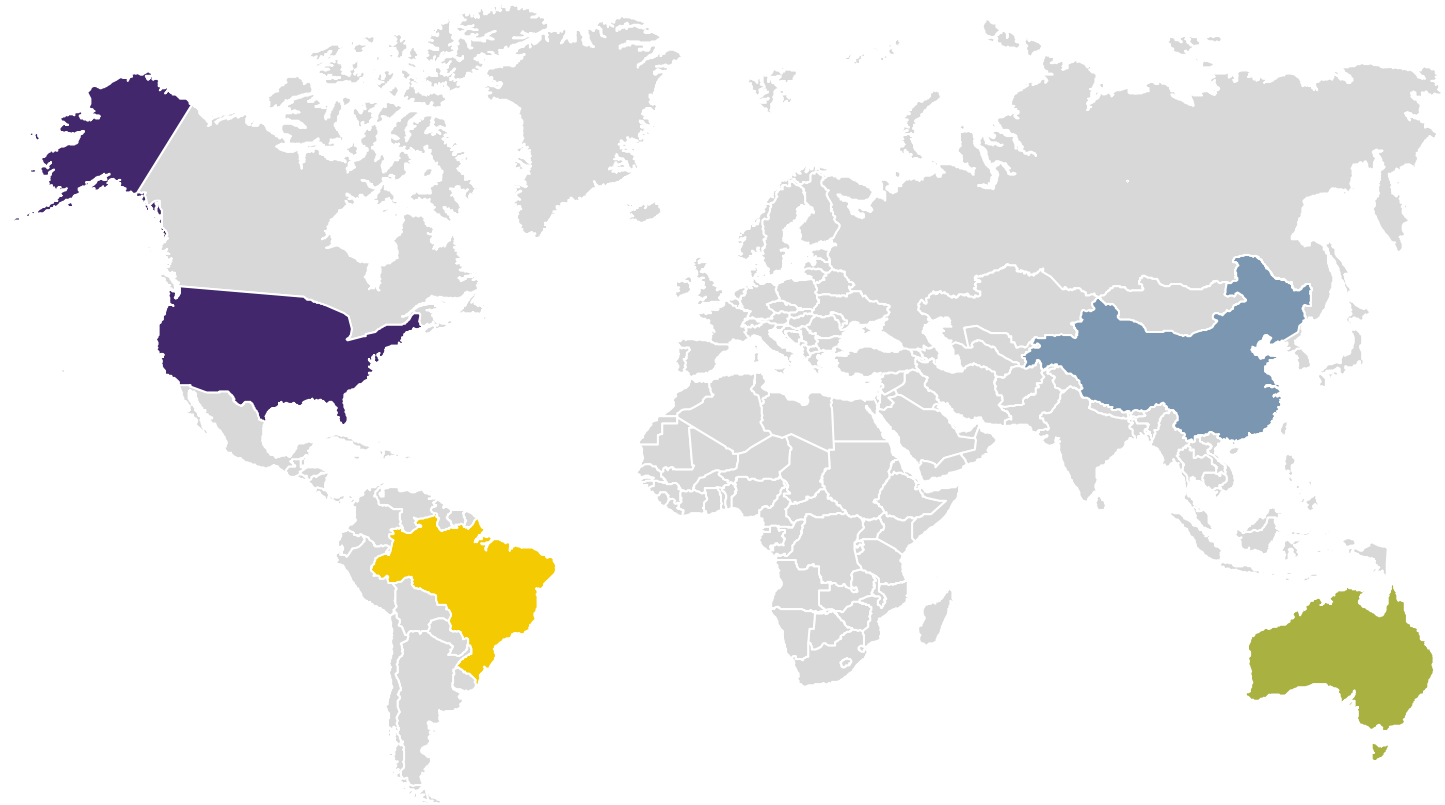
VISION IMPACT INSTITUTE

Population growth and ageing will increase the risk that more people acquire vision impairment

Regional Differences – Inequity

The prevalence of **distance vision impairment** in low- and middle-income regions is estimated to be **4x higher** than in high-income regions (1).

Rates of unaddressed **near vision impairment** are estimated to be greater than **80%** in western, eastern and central sub-Saharan Africa, while comparative rates in high-income regions of North America, Australasia, Western Europe, and of Asia-Pacific are reported to be lower than **10%** (2).

The burden of most **eye conditions and visual impairment** is far greater among people with low incomes, living in in rural communities, older people, women, people with disabilities, ethnic minorities, and indigenous populations.

1) Bourne RRA, Flaxman SR, Braithwaite T, Cicinelli MV, Das A, Jonas JB, et al.; Vision Loss Expert Group. Magnitude, temporal trends, and projections of the global prevalence of blindness and distance and near vision impairment: a systematic review and meta-analysis. Lancet Glob Health. 2017 Sep;5(9):e888–97.
2) Fricke, TR, Tahhan N, Resnikoff S, Papas E, Burnett A, Suit MH, Naduvilath T, Naidoo K, Global Prevalence of Presbyopia and Vision Impairment from Uncorrected Presbyopia: Systematic Review, Meta-analysis, and Modelling, Ophthalmology. 2018 May 9
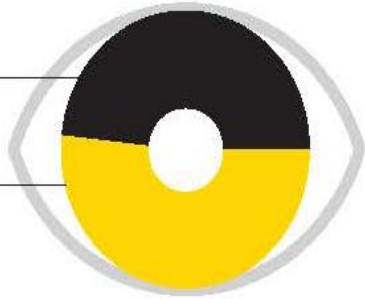
VISION IMPACT INSTITUTE

Strategies to address eye care needs

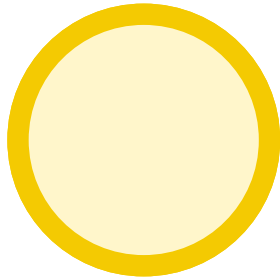**There are effective interventions to address the needs associated with eye conditions and visual impairment**

Incidence Prevention

Interventions that help mitigate causes and risks factors of eye diseases as well as other health conditions can be highly effective (e.g. sanitation interventions, Vitamin A supplementation, time spent outdoors, diabetes control measures).

Raise Awareness

Engage and empower people to take control of their health and adopt healthy behaviors (eye exams, eye wear compliance, protection, time spent outdoors, etc.)

Prevention
Causes, risk factors & addressing those eye conditions derivative from other health conditions

Treatment
Targeting cure, symptoms & progression

Health Promotion
Behavior change and Education

Rehabilitation
Major eye conditions that cannot be treated require vision rehabilitation

Address VI and Restore Vision

Spectacles, contact lenses and surgical interventions are functional and cost-effective ways to help improve vision. For other eye conditions, early detection, routine monitoring & management, and therapeutic methods are needed to slow progression.

Tailored to individual needs

Age-related macular degeneration and glaucoma cannot be treated. Adapting environments, tools, counseling and training are the most common interventions in improving functioning for people with an irreversible vision impairment.

VISION IMPACT INSTITUTE

Challenges ahead

Cataract surgery
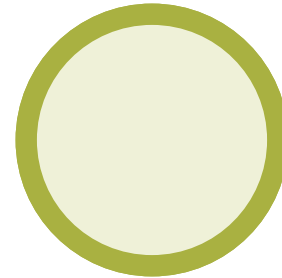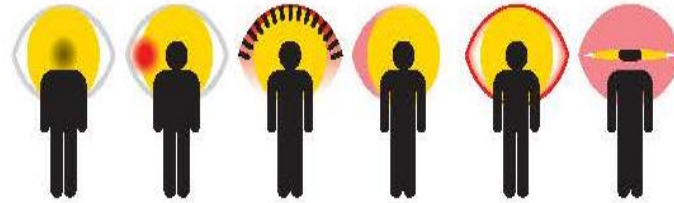US$ 6.9 billion

Refractive error
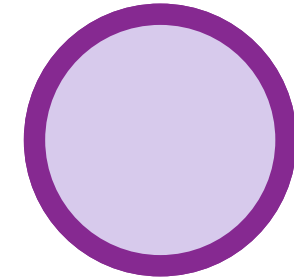US$ 7.4 billion

US$14.3 billion

Needed Investment

There is a substantial burden associated with vision impairment and blindness. Addressing the coverage gap of **200 million** people with moderate to severe VI and blindness due to cataract and refractive errors is a good investment.

Increase in Eye Conditions

Projections are on the rise due to ageing population, life expectancy increase, population growth, lifestyle and NCDs. Everyone will experience at least one eye condition in their lifetime.

Data Challenges

Population-based surveys, rapid assessments, and prevalence surveys have limitations and do not account for all ages and the total number of people with vision impairment & blindness. Better integration of HIS for eye care are needed.

VISION IMPACT INSTITUTE

Universal Health Coverage and the Sustainable Development Goals

Addressing eye care needs contributes to achieving the targets of the SDGs by 2030
Particularly relevant to **SDG3 - Good Health and Well-Being for all at all ages**

- **SDG 3.3 -** Neglected Tropical Diseases
- **SDG 3.4 -** Mental Health
- **SDG 3.6 -** Road Traffic Accidents[(2020)]

- **SDG3.8 – Achieve UHC**
- **SDG 3c –** Workforce Health

3 GOOD HEALTH AND WELL-BEING

Integrated people-centered eye care

Four Implementation Strategies:

1. **Empowering and engaging people and communities** to become effective users of health services; including better eye health literacy.

2. **Reorienting the model of care** with innovative models that prioritize and strengthen primary and community health care services; including adequate funding, appropriate workforce training, and sustainable workforce.

3. **Coordinating services** including individuals, health programs and providers across sectors including social services, finance, education, labor, and the private sector that would ensure continuity of eye care through life-course needs;

4. **Creating an enabling environment** that integrates the delivery of eye care services – including leadership and governance; information; health workforce; health financing; and medicines and health technologies (including assistive products).

VISION IMPACT INSTITUTE

Recommendations

Integration

The key proposal of the Report is to **integrate and scale up eye care** within national health services, based on strong primary health. Eye care needs to be part of **Universal Health Coverage** as an overall health strategy.

Implement integrated people-centered eye care

Eye care integrated into the health systems and national health strategies with services managed and delivered so that people receive a continuum of promotion, preventive, treatment and rehabilitative interventions to address the full spectrum of eye conditions.

Innovation and Data

Promote high-quality research and address the gaps in data, particularly regarding met and unmet eye care needs, so that we can plan services and monitor progress effectively.

Monitor Trends and Evaluate Progress

Better and more comprehensive information systems in eye care that will allow to evaluate progress effectively, facilitate comparisons across countries, and strengthen the implementation of IPEC.

Raise Awareness and engage and empower people and communities

Importance of early identification of eye conditions; the need to prevent and address vision impairment; and how underserved populations can be empowered to gain access to eye care services.

Eliminating Poor Vision in a Generation

Why this Report?

This report offers insight into the scale of the vision problem between now and 2050, and the actions and investments needed to solve it.

Kristan Gross, Global Executive Director Vision Impact Institute.

"Limited research exists on the value of providing spectacles so governments often de-prioritize spectacles from their agenda. There is strong need to develop an evidence base around the value of providing eyewear and conveying this to secure public sector funding".

Key Proposal

Poor vision can be eliminated by 2050 with an estimated $14 Billion investment in a combination of sustainable access points, innovation in affordable products, awareness raising

Key Facts

1

Focused on Uncorrected Refractive Error

This report defines the scale of the vision care crisis, as it relates to **uncorrected refractive errors (URE),** over the **next 30 years** and proposes key priorities, actions and investment needed to sustainably address it.

2

Affecting 2.7 Billion People

For the purpose of this report the number of people estimated to be suffering from URE in 2018 is **2.7 billion**. (Based on those with a Visual Acuity of 6/9)

3

Developed with Expert Input

McKinsey & Company provided **analytical support** for the report, interviewing over 100 experts in eye health, academia and program implementation.

4

A Partnership Approach

The report recommends **a partnership approach** to inspire widespread systems change via multi-faceted strategies addressing public health systems, entrepreneurship, private sector actions and strategic philanthropy.

5

Eyeglasses as a Focus

Eyeglasses are recommended as the simplest solution to refractive error. While other solutions are acknowledged they are not featured in this report.

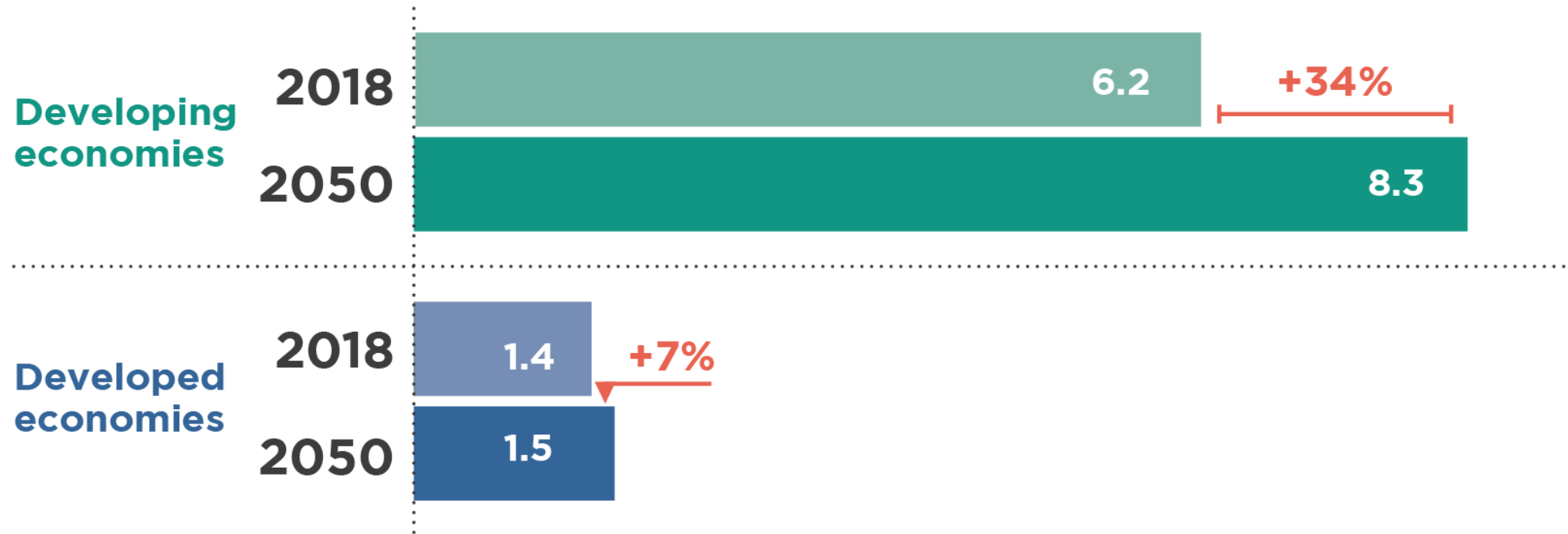**6**

Innovation Predictions are Conservative

Actions and investments recommended in the report have been estimated based on what is thought to be possible in the next three to 10 years, rather than the next 30. Nevertheless, a front-loaded innovation investment (in the first 10 years) will continue to be needed.

VISION IMPACT INSTITUTE

Impairment vs. Need

- **WHO** quantifies vision impairment due to refractive error (RE) based on a **less than 6/12 visual acuity cut off**. This recognizes the resource limitations that public health systems may have as well as the burden on individuals.

- This report estimates the number of people suffering from URE in 2018 as **2.7 billion people**. This is based on a **6/9 visual acuity cut-off** to establish a **need-based model** because:
  - Individuals still battle to see at distance with a 6/12 visual acuity and this limits their ability to work or learn in various circumstances
  - Many individuals present clinically for correction with a 6/12 impairment
  - 6/12 visual acuity is often needed for drivers license and other functions

VISION IMPACT INSTITUTE
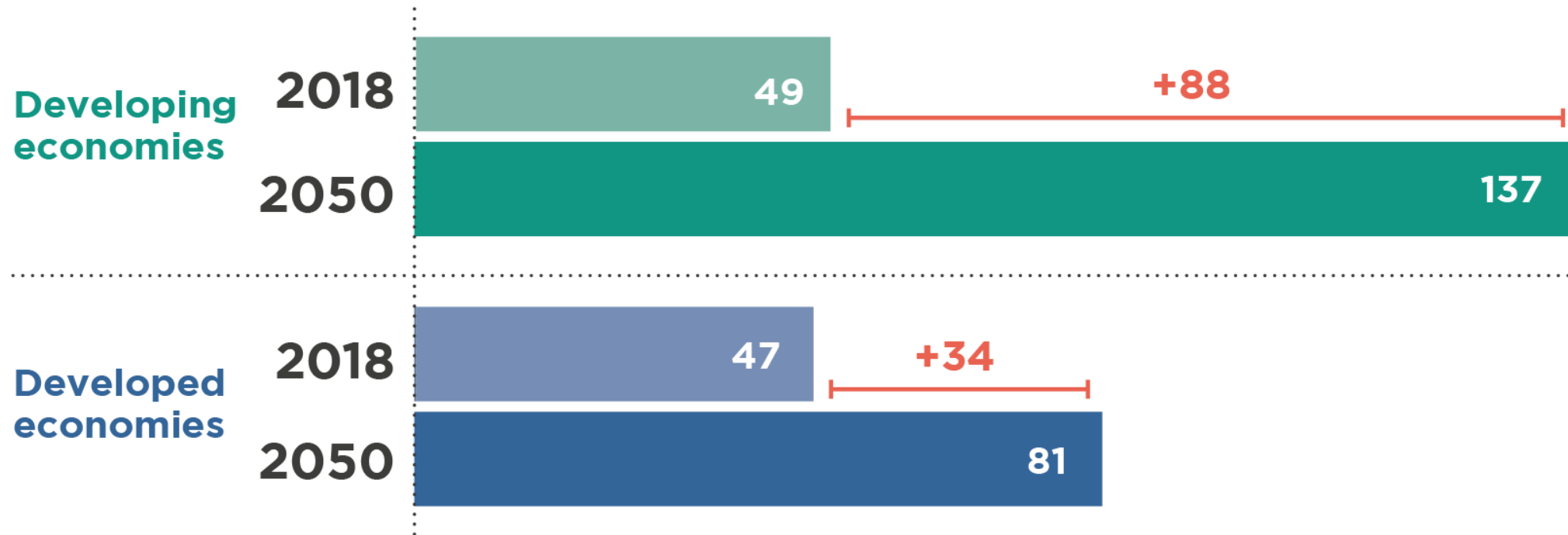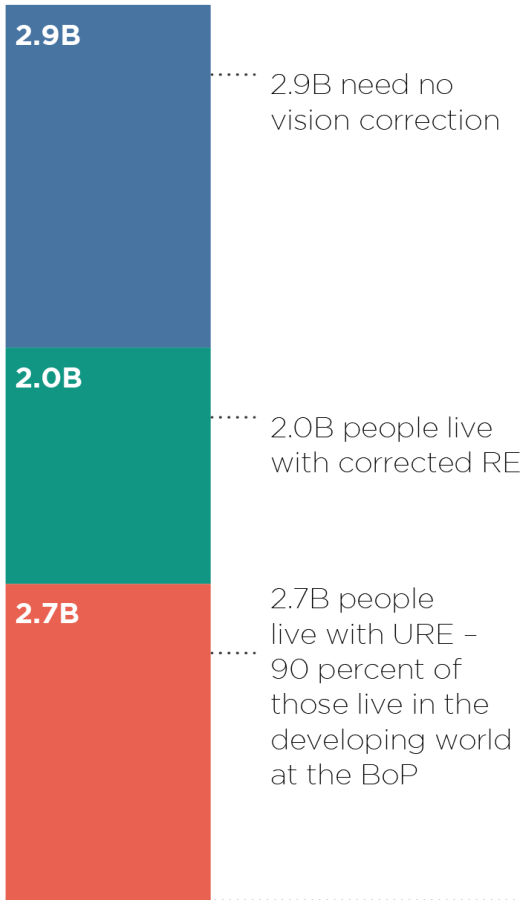
Setting the Context

POPULATION GROWTH

Billions of people

Developing economies
- 2018: 6.2
- 2050: 8.3
- **+34%**

Developed economies
- 2018: 1.4
- 2050: 1.5
- **+7%**

VISION IMPACT INSTITUTE

Setting the Context

GDP

Trillion USD, constant 2010 $

Developing economies

2018 — 49

2050 — 137

+88

Developed economies

2018 — 47

2050 — 81

+34

VISION IMPACT INSTITUTE

Global RE Burden

2018

2.9B 2.9B need no vision correction

2.0B 2.0B people live with corrected RE

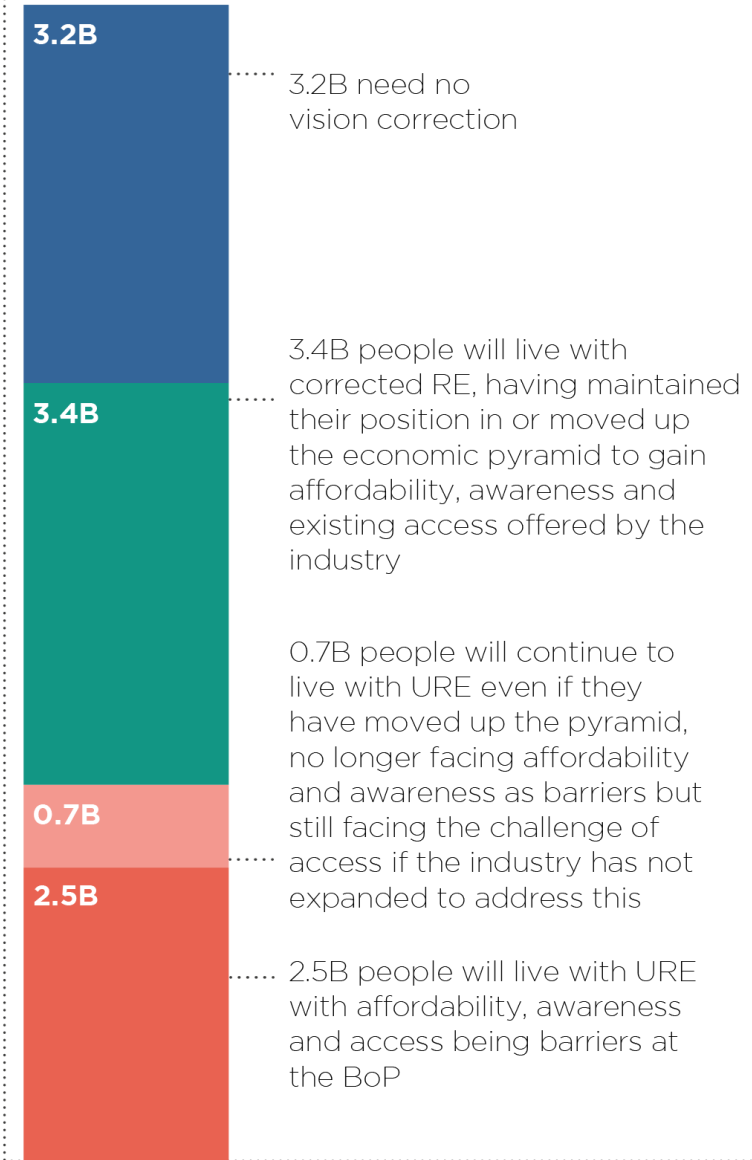**2.7B** 2.7B people live with URE – 90 percent of those live in the developing world at the BoP

Population
7.6B

2050

If the Industry maintains its 2018 focus, serving established markets using similar channels and products:

3.2B 3.2B need no vision correction

3.4B 3.4B people will live with corrected RE, having maintained their position in or moved up the economic pyramid to gain affordability, awareness and existing access offered by the industry

0.7B 0.7B people will continue to live with URE even if they have moved up the pyramid, no longer facing affordability and awareness as barriers but still facing the challenge of access if the industry has not expanded to address this

2.5B 2.5B people will live with URE with affordability, awareness and access being barriers at the BoP

Population
9.8B

VISION IMPACT INSTITUTE

RE Cases by Type

2018 Population 4.7B

Myopia | 1.5B people suffer from myopia (below 40 years old)

1.5B

Myopia | 1.0B people suffer from myopia (above 40 years old i.e., overlap with presbyopia)

1.0B

Presbyopia | 1.4B people suffer from presbyopia

1.4B

Hyperopia | 0.6B people suffer from hyperopia

0.6B

Astigmatism | 0.2B people suffer from astigmatism

0.2B

2050 Population 6.6B (if current actions are maintained)

Myopia | 2.2B people suffer from myopia (below 40 years old)

2.2B

Myopia | 2.1B people suffer from myopia (above 40 years old i.e., overlap with presbyopia)

2.1B

Presbyopia | 1.3B people will suffer from presbyopia

1.3B

Hyperopia | 0.8B people will suffer from hyperopia

0.8B

Astigmatism | 0.2B people suffer from astigmatism

0.2B
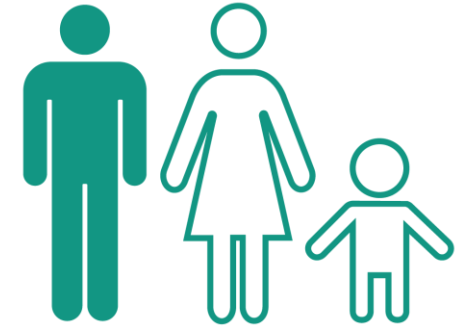
VISION IMPACT INSTITUTE

Poor Vision has a Real Social and Economic Impact

Uncorrected poor vision is the world's **largest unaddressed disability**

1 in 3 people are affected by uncorrected poor vision — **90% live in the developing world** at the economic base of the pyramid

Uncorrected poor vision costs the global economy **$272B in lost productivity every year**

By 2050, over **half of the world's population** may be **afflicted** with **myopia** with drastic long-term health implications

Togther We Can Solve the Issue…

$14B IS NEEDED TO CREATE A WORLD FREE FROM UNCORRECTED REFRACTIVE ERRORS

$2.4B to create sustainable access points

$0.7B to innovate for affordable products

$4.5B to raise awareness

$6.2B to fund subsidized & free services

VISION IMPACT INSTITUTE

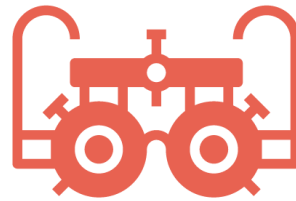# Creating Sustainable Access Points

$2.4B to create 1 million new sustainable access points which will equip 90 percent of the population in need

- **600,000** full refraction service points
- **400,000** readers-only points needed

Innovating for Affordable Solutions

$0.7B for innovation to accelerate the affordability of cost-to-serve and cost of products

- **Investment in screening tools** requiring less operator training

- Accelerate the scale-up of **digitization**

VISION IMPACT INSTITUTE

Raising Awareness

$4.5B to increase awareness of poor vision and its socio-economic impact at an individual and societal level

- To **drive demand for glasses** and the uptake of services

- To **drive investment** in new and existing services

VISION IMPACT INSTITUTE

Funding Subsidized and Free Services

$6.2B to fill funding gaps across affordability and access for people unable to pay for services

- **50%** of wearers in need of subsidized or free services can be **served by sustainable access points**

VISION IMPACT INSTITUTE

Access the reports here:
WHO Report on Vision
Eliminating Poor Vision in a Generation

THANK YOU

VISION IMPACT INSTITUTE

VisionImpactInstitute.org