If you measure it, you can shape it!

The Societal Value of Health: Investing in Innovation for Baltic Prosperity

Baltic Assembly Conference: Health as an investment in Baltic security and future

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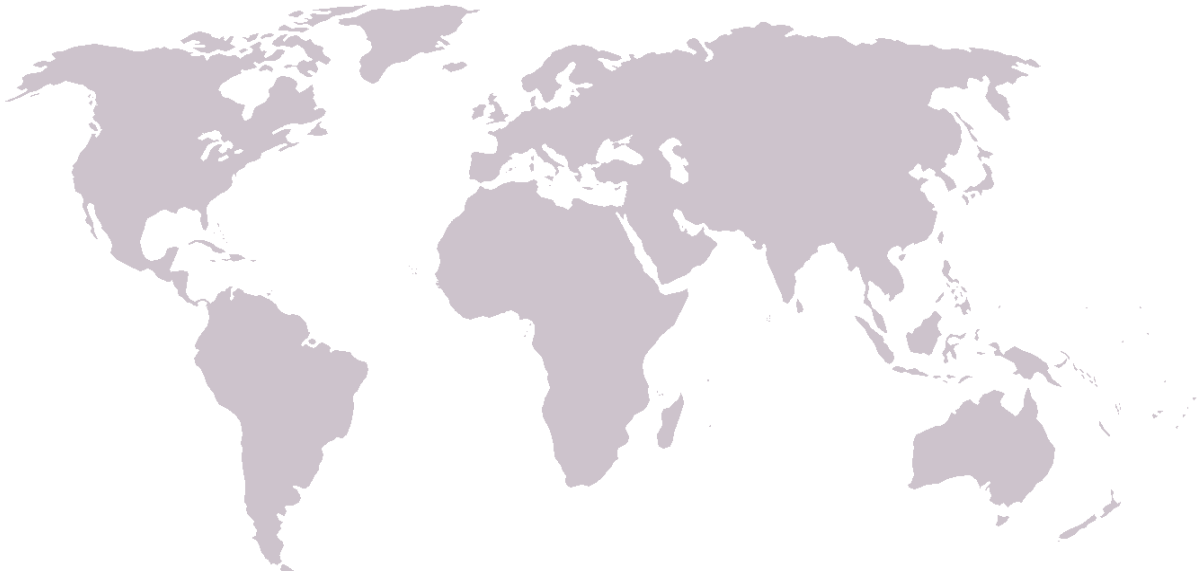
December 12, 2025

About WifOR

Worldwide presence



- Locations: Berlin, Darmstadt, Leipzig, Athens
- Projects in 55 countries – global, regional, and national analyses

Facts & Figures

- Economic research institute
- Spin-off from the Department of Public Economics & Economic Policy at the Technical University of Darmstadt, Germany
- 80 Employees
- Over 650 successful projects for companies, associations, and ministries
- Research areas:

Agenda

1. Paradigm Shift: Health as an Investment
2. The Baltic Health & Economic Reality
3. The Socioeconomic Burden – Method and selected Use Cases
4. ROI and Societal Impact
5. Recommendations

1

Paradigm Shift: Health as an Investment

WifOR is fostering a paradigm shift in health – from a cost factor to a driver for growth, innovation, wealth, and prosperity with better health

PAST

Healthcare as a cost factor

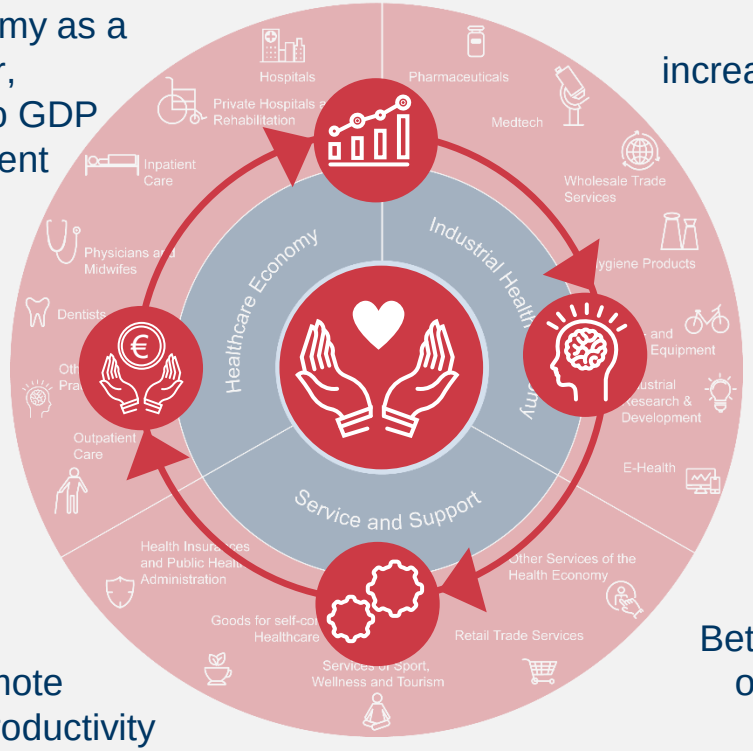
Separate silos and fragmentation | Healthcare only | Input orientation | Increasing health expenditures

FUTURE

Health Economy as a driver for growth and employment

Health Economy as a diverse sector, contribution to GDP and employment

Growth sector, increasing work force, new career opportunities

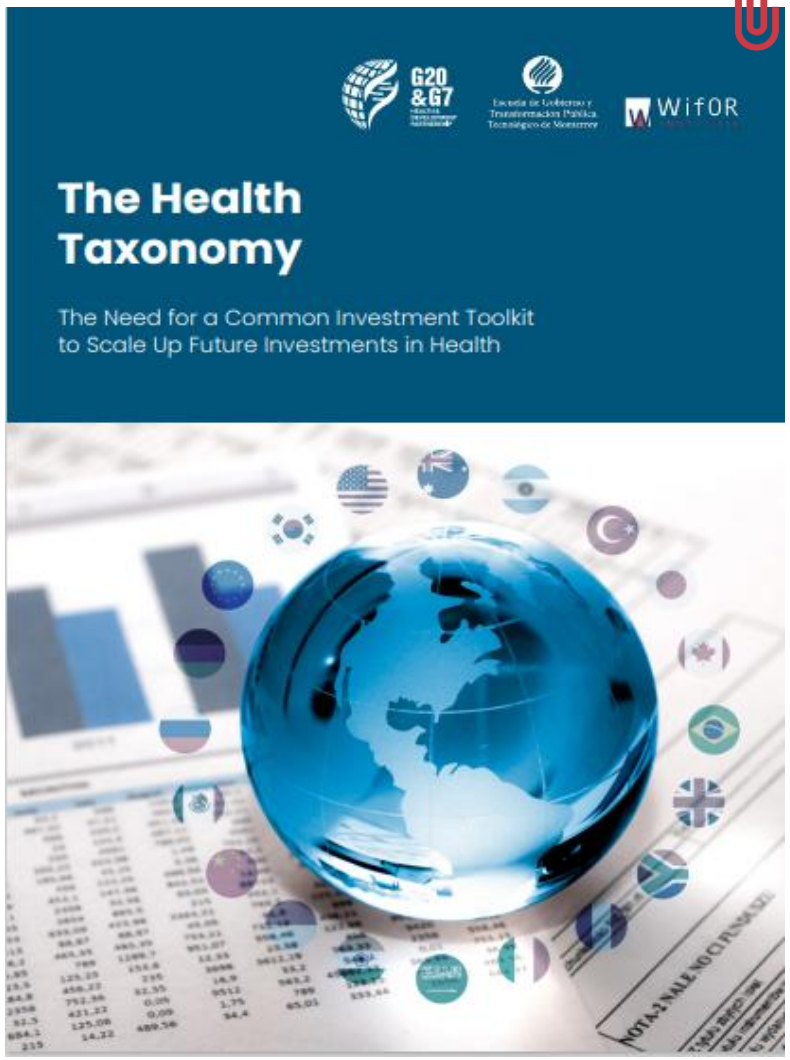


Investment in health to promote growth and productivity

Better quality, more outcome oriented

Source: WifOR illustration, following Henke, Neumann, Schneider et al. (2010).

WifOR co-launched the G20 & G7 toolkit for strategic health investments at the H20 Summit in Geneva

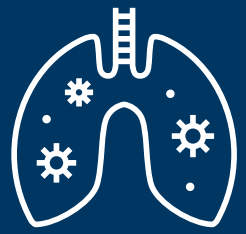


Source: WifOR 2025. Own illustration.

WifOR advocates the integration of global health metrics into policy making at UN, WHO, G20, G7, EU Parliament, APEC, and others

What is the return on investment (ROI) of health?

1

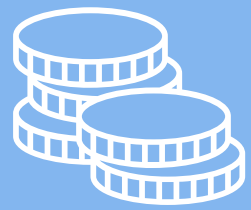


Measure the social burden (cost of illness)

2

Calculate the Social Impact of medical interventions

3



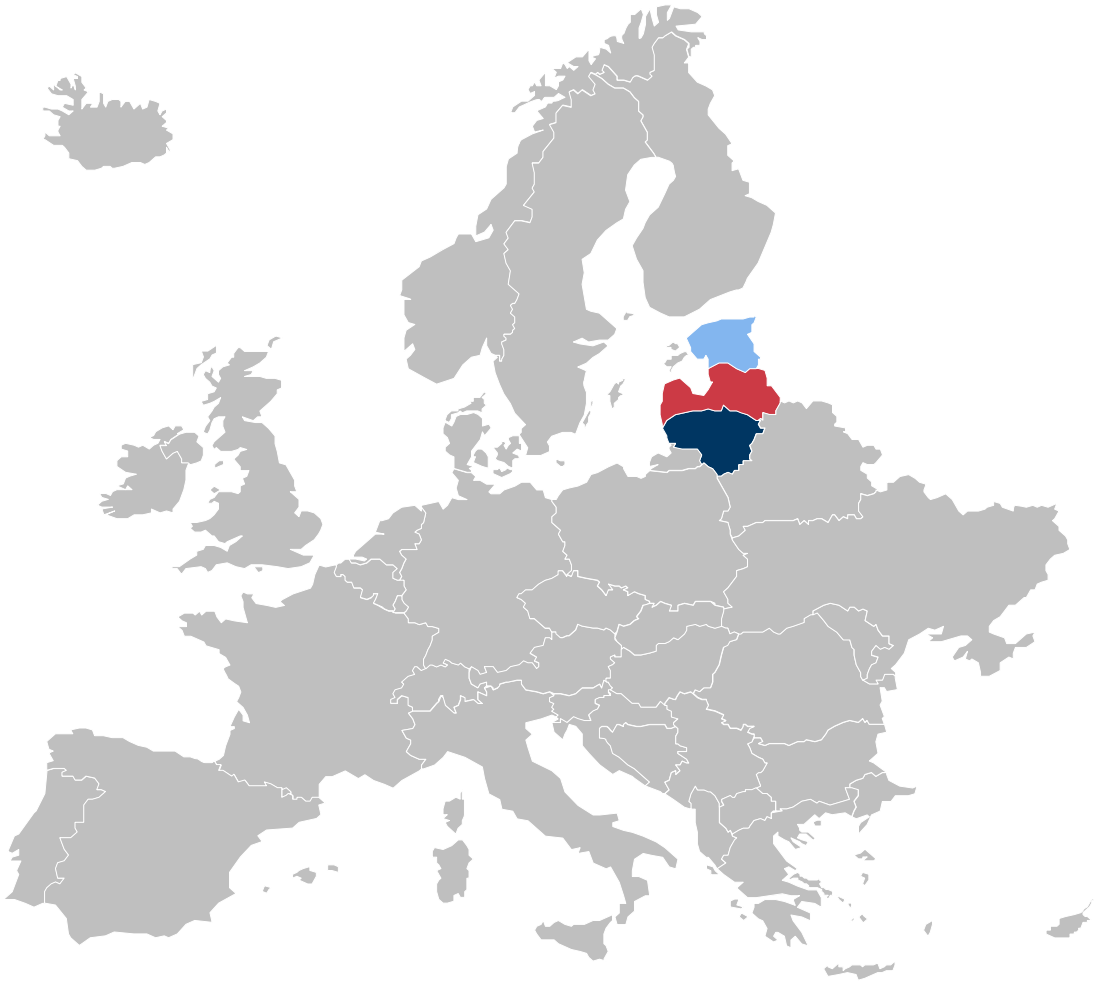
Quantify economic impact of investments

Source: WifOR illustration.

2

The Baltic Health & Economic Reality- Burden vs. EU Benchmarks

Why shifting the paradigm from “cost” to “investment” is essential?



Baltics Health Spending

- 7.4 % of GDP vs. EU 10.0 %
- 26 % lower than the EU average (per capita ≈ €2,500 vs. EU €3,835)

Baltics Life Expectancy

- 76.9 years vs. EU 81.5 years
- 4.6 years shorter lives on average

Source: Eurostat, 2023

Annual GDP losses in the Baltics from health-related productivity losses

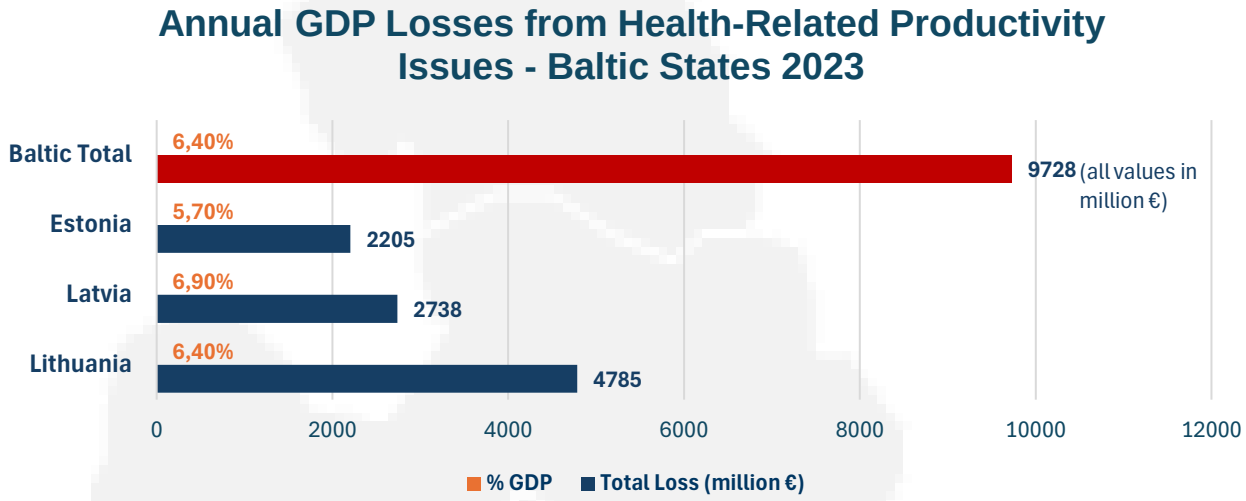
Annual GDP losses across all diseases €9.7 billion per year*

= 6.4 % of total Baltic GDP

Absenteeism €1.52 billion

Presenteeism €2.28 billion

Preventable deaths €5.92 billion



Healthcare System Scale

- **Enough to fund full universal healthcare for 3.6 million Baltic citizens for one entire year.**

Infrastructure Investment

- **Enough to build and fully equip 30-45 state-of-the-art hospitals or NCD centers across the three countries.****

Household Support

- **Equals the total yearly income of more than 770,000 Baltic families.*****

Source: derived estimates using Eurostat,2023. *Note: Totals may not sum due to rounding, €9.7 billion = total health-related productivity losses from all diseases and external causes combined (absenteeism, presenteeism and preventable deaths). The preventable-deaths component (€5.9 bn) is calculated using the official Eurostat preventable-mortality categories mainly cardiovascular (55–60%), cancers (15–18%), mental/neurological (8–10%), and others (Eurostat preventable mortality distribution).**assuming €200–300M per facility. ***average disposable household income ≈ €12,600 €.

Healthy life years (HLY) gap in the Baltics is 2-10 years below EU average

Baltic citizens lose 6 healthy years
compared to the EU average

5.9 fewer healthy years at birth
(52.7- 60.9 vs. EU 63.1 years)

2.9 fewer healthy years at age 65
(4.8 - 7.6 vs. EU 9.5 years)

€2 billion annual loss in productivity & extra pension/long term care costs
(= 1.3 % of Baltic GDP)

Just 2 healthy years of the gap

=

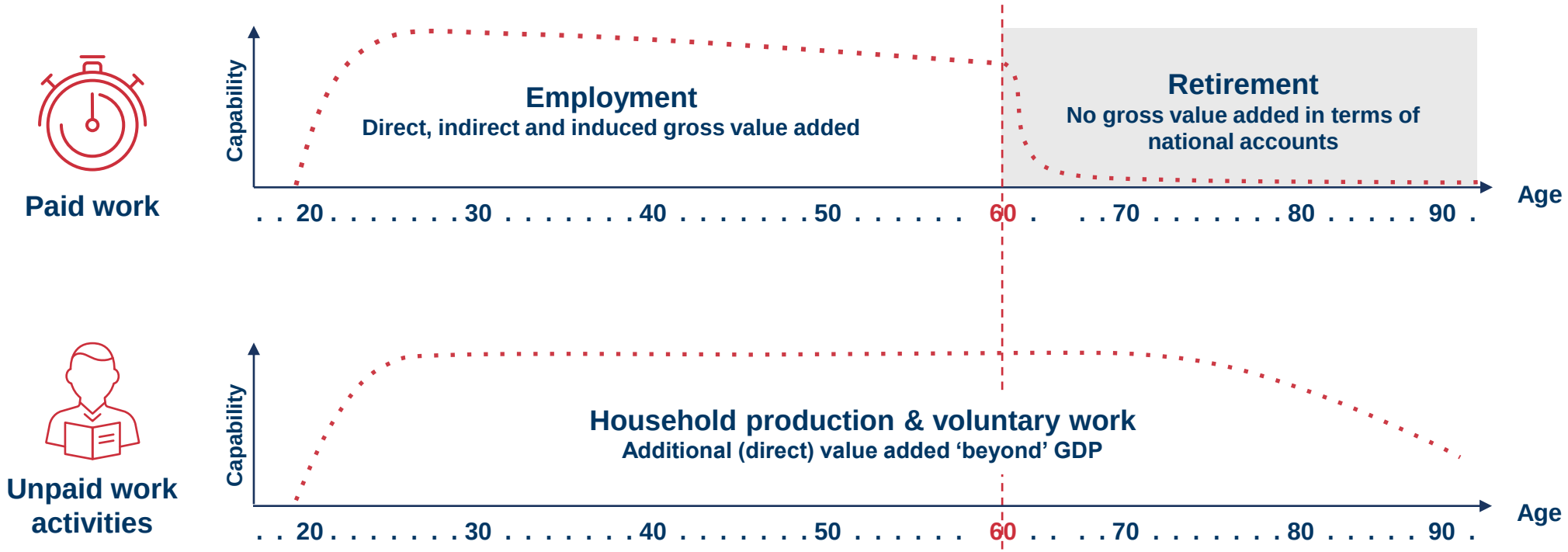
+ €1 billion economic gain every year

Source: Eurostat, 2023

3

The Socioeconomic Burden – Method and selected Use Cases

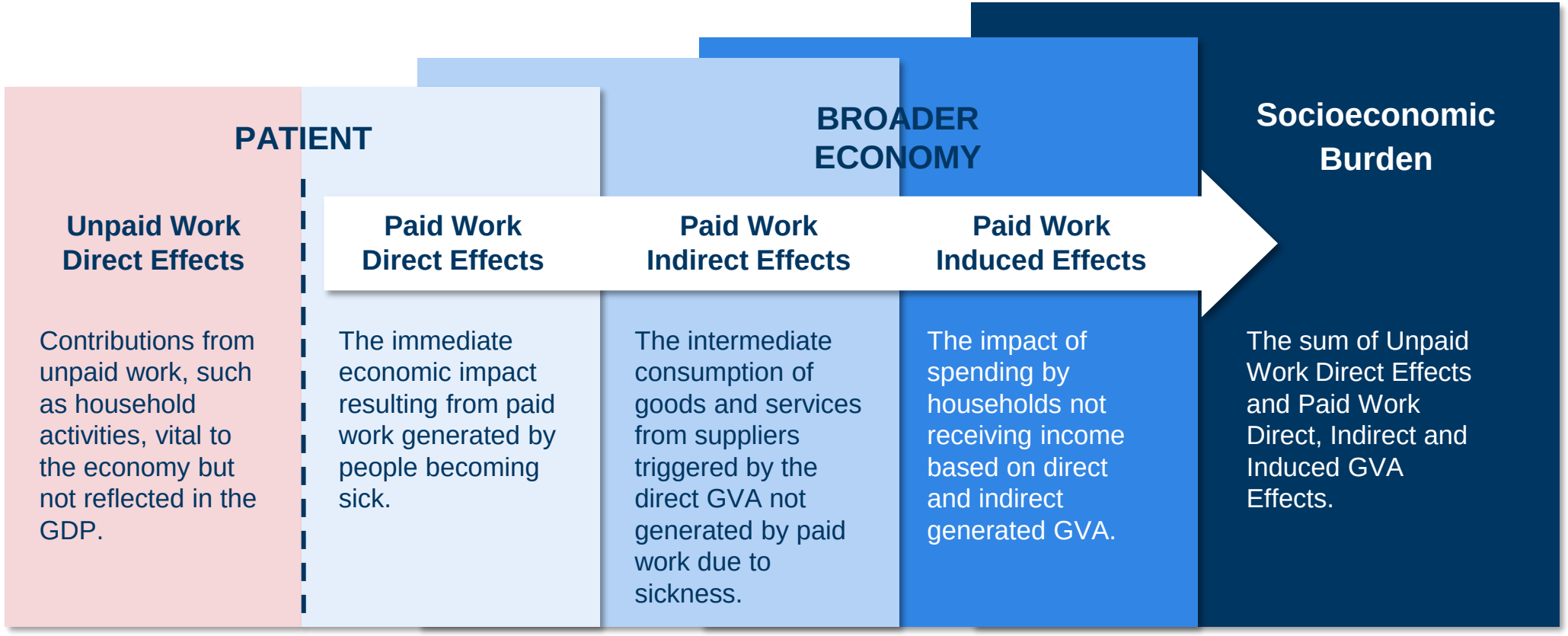
Individuals contribute to a nation's wealth through both paid work and unpaid work activities over their course of their lives



- By capturing *unpaid* work productivity in addition to paid work productivity, the Socioeconomic Burden of Diseases includes the value lost beyond GDP from both employees and the non-working population.

GDP: Gross Domestic Product.

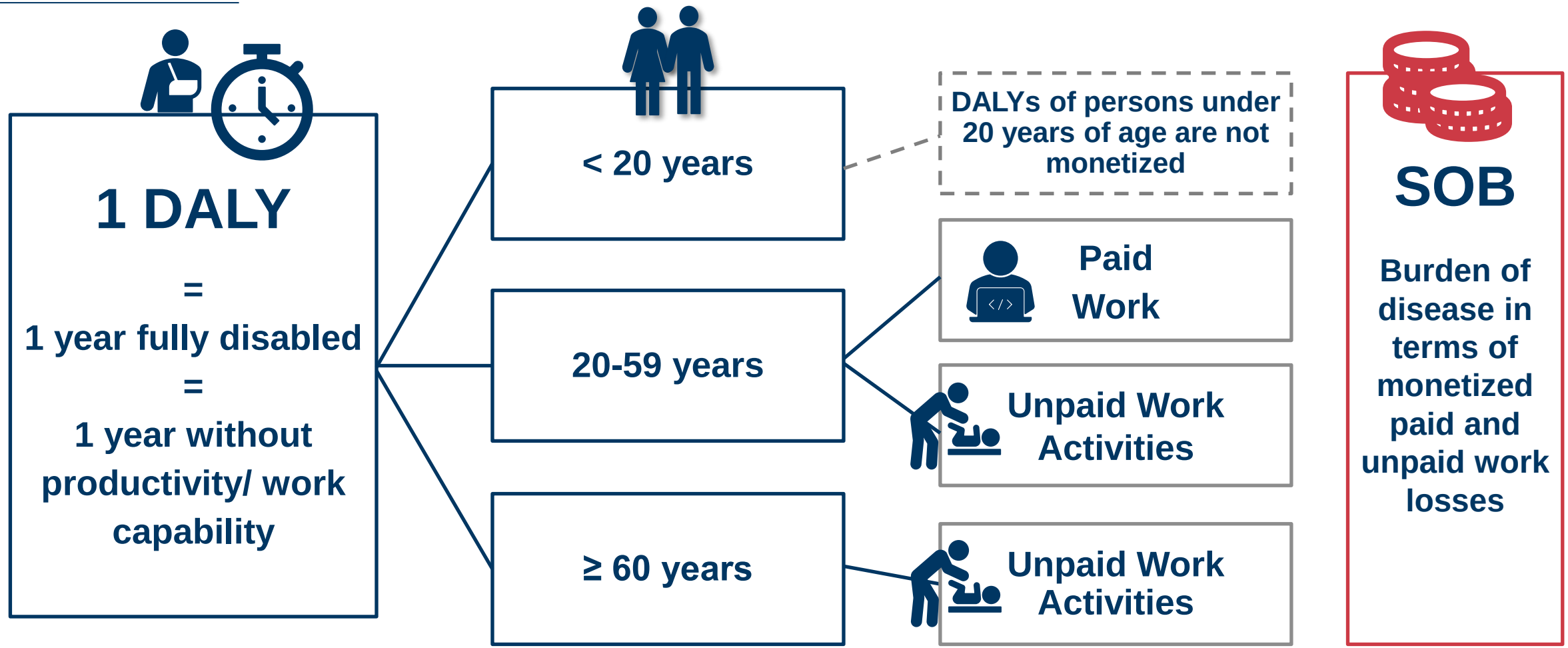
A disease not only affects patients' paid and unpaid work productivity, but impacts adjacent sectors and the broader economy



Sources: The effects of having a healthier population on the overall economy have been explored under the input-output (IO) model perspective (Leontief, 1986; Conway, 2022). Conway, R.S. (2022) Empirical Regional Economics. Springer Texts in Business and Economics. Switzerland: Springer, p. 275. Available at: https://econpapers.repec.org/bookchap/sprsptbec/978-3-030-76646-7.htm (Accessed: 20 December 2022). Leontief, W. (1986) Input-Output Economics. New York: Oxford University Press

GVA: Gross Value Added.

Quantifying the socioeconomic burden (SOB) of a disease



DALY: Disability-Adjusted Life Year.

Beyond the diagnosis: Socioeconomic burden of retinal disease (AMD/DME) in Baltics (2025)

In 2025, the Socioeconomic Burden of retinal diseases is approximately

$97 million*

Paid work

$40 million

Unpaid work

$57 million

Treatment coverage for Retinal Patients

- Equivalent to **treating 19,000 – 32,000 Baltic AMD and DME patients for 1 year.****

Infrastructure Investment

- Enough to build 14-24 **specialized retinal centers across the three countries.*****

Blindness Prevention

- Enough to prevent severe vision loss or legal blindness in **4,000 – 8,000 Baltic citizens over the next 10 years**, through timely diagnosis and effective retinal treatment.

*Data based on DALYs and labor market participation, 2025 projections. **$3,000–$5,100 per patient per year (drug + visits + monitoring). *** assuming ~ 4$ - 7$M per center for construction + initial operating costs).

Beyond the diagnosis: Socioeconomic burden of HER2+ breast cancer (BC) in Baltics (2025)

In 2025, the Socioeconomic Burden of HER2+ BC is approximately

$288 million*

Paid work

$121 million

Unpaid work

$167 million

Treatment coverage for BC Patients

- Equivalent to providing full high efficacy HER2-targeted therapy for 4,800 -7,200 Baltic HER2+ BC.**

Early Detection

- Enough to fund 1.5 -1.9 million mammograms across the three countries.***

Progression Prevention

- Enough to reduce the number of patients progressing to metastatic HER2+ breast cancer by an estimated 800–1,600 cases over the next 10 years, through timely diagnosis and full access to high-efficacy targeted therapy.

*Data based on DALYs and labor market participation, 2025 projections.** $40k–$60k per patient-year. ***assuming $150 per scan.

The high socioeconomic burden of cardiovascular diseases (CVDs) indicates that reducing the burden is essential

In Europe, CVDs is estimated to generate a social burden equivalent to **4-5 % of GDP***.

In the Baltic States this equals €6 – 8 billion annually. If we prevented just half of all CVD events → we would increase Baltic wealth by 2 – 2.5 % of GDP

A €20 million prevention program in Estonia alone creates €127 million in societal value over 15 years
= 7.75× return and 315 lives saved.**

*Estimate based on results from Luengo-Fernandez et al. (2023) on the economic burden of CVD in the EU (2024), adapted using WifOR's methodology. While Luengo-Fernandez et al. (2023) calculate direct costs (health, social, informal care) and productivity losses (valued with average earnings), our approach builds on DALYs to capture the full potential productivity loss in terms of paid and unpaid work, valued via GVA, and includes indirect and induced economic effects. This adaptation results in an estimated GDP impact of 4–5%, compared to 2% in the original study.

**Estimations consider the forecasting of the country's economic development during the first 15 years after starting the P-CVD program. Source: WifOR Elaboration. HernandezVillafuerte,et al.. 2025.The Health ROI Assessor: Evaluating Novel CVD Prevention Approaches in Estonia. Value & Outcomes Spotlight March/April 2025, pp 31-34

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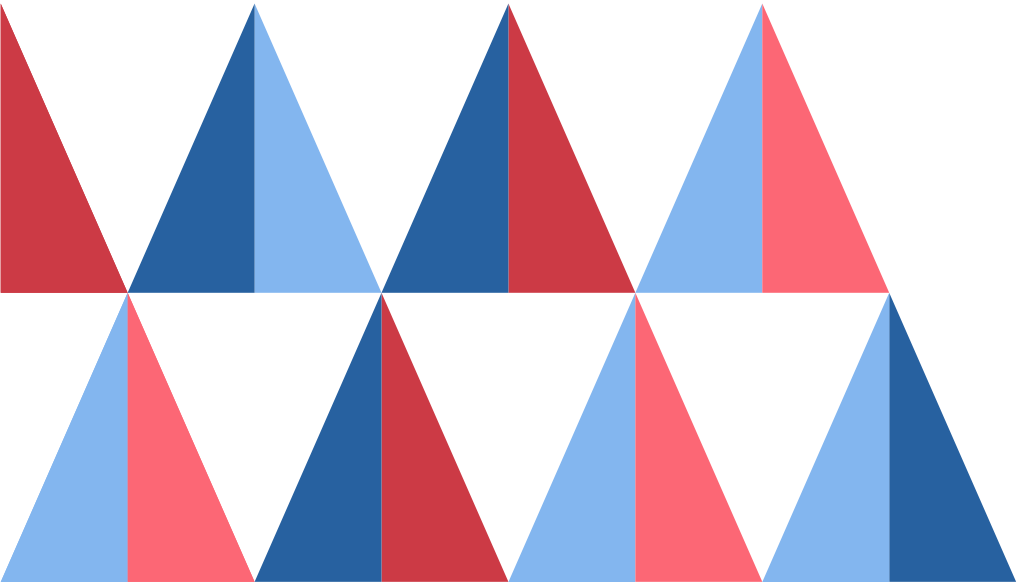
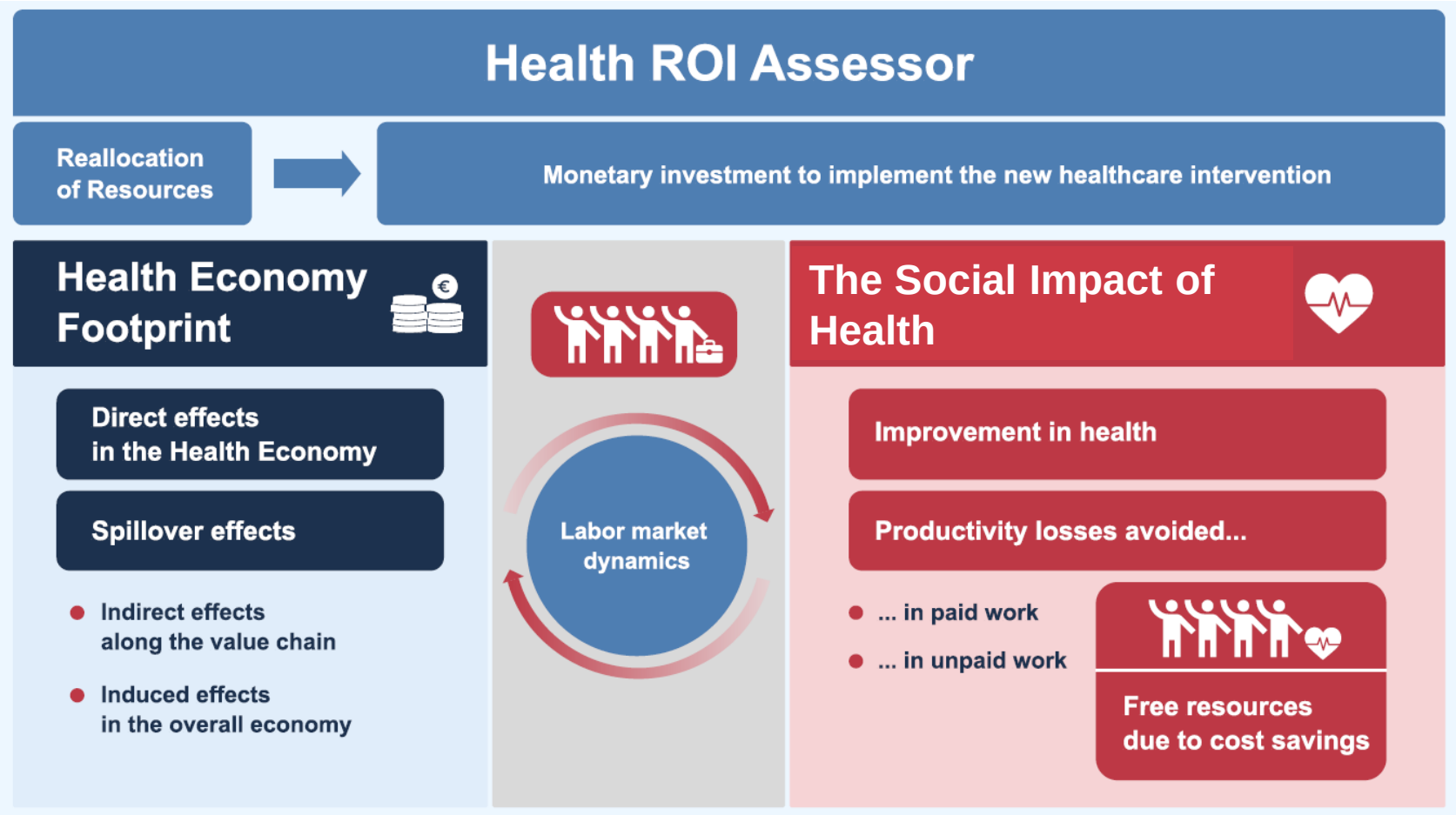


ROI and Societal Impact

WifOR‘s Health ROI Assessor Framework



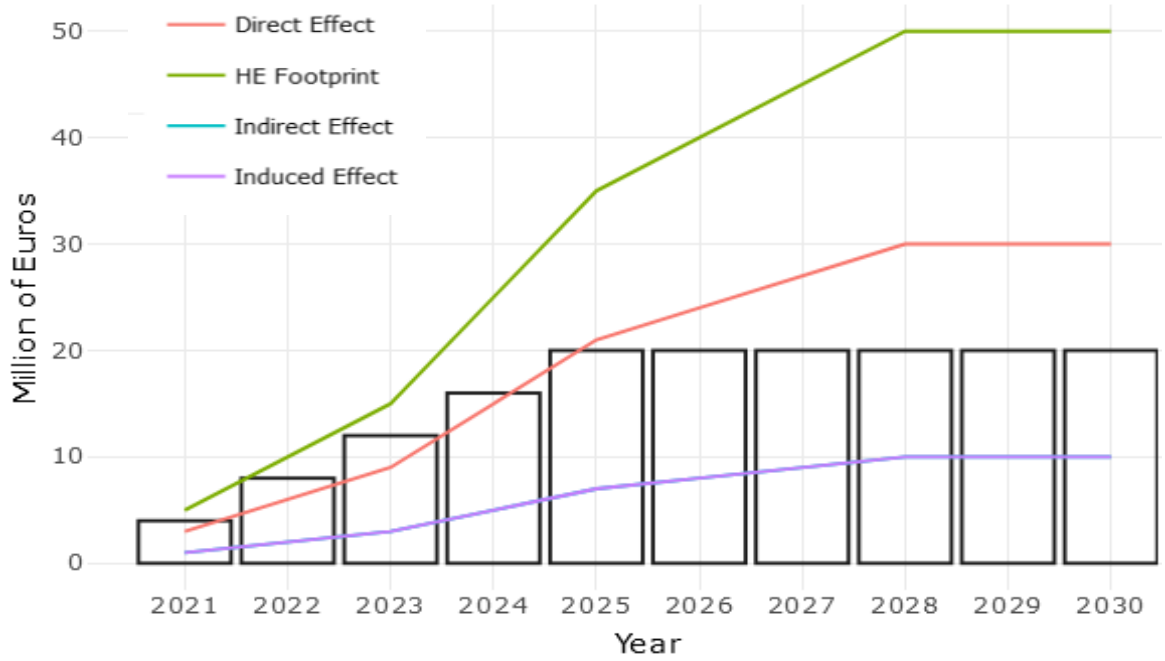
Additional details in Hernandez-Villafuerte, 2025

Macroeconomic value of a Cardiovascular Disease Prevention Program in Estonia. Short term – Base case scenario

HE footprint

- An investment of €20 mio over five years **generates** in terms of direct, indirect, and induced effects during the first **10 years:**
  - **€ 50 mio GVA value**
  - **1,178 additional workers**.

Figure 5. Cumulative GVA Value Created via the HE Footprint



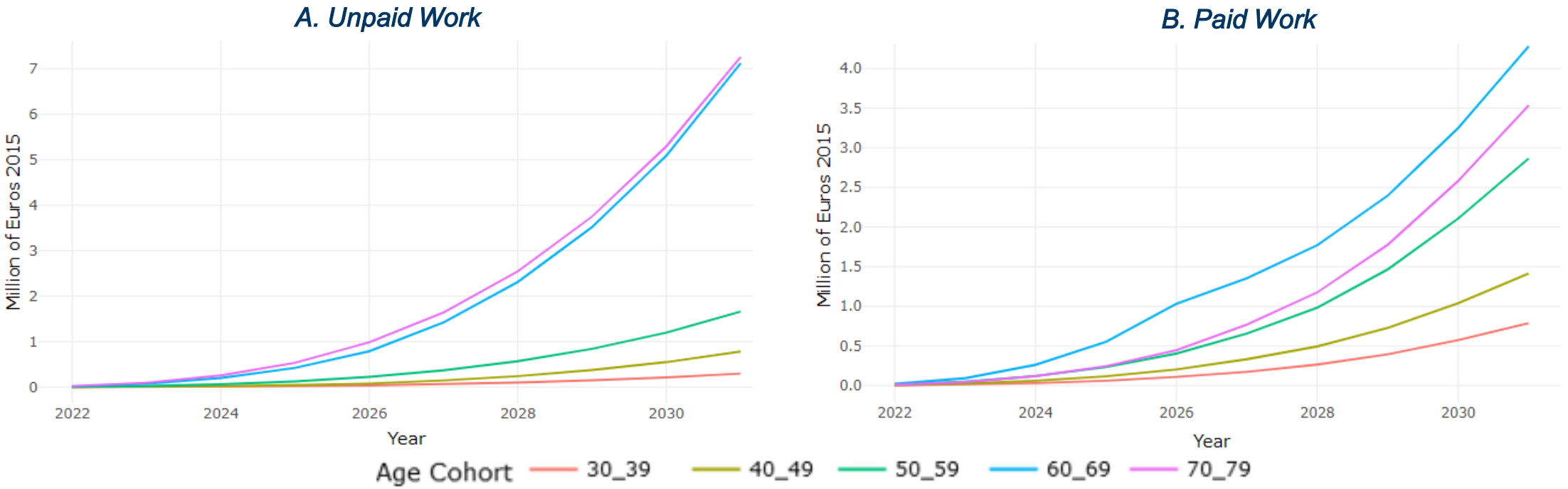
Source: WifOR Elaboration. Hernandez-Villafuerte et al.. 2025.The Health ROI Assessor: Evaluating Novel CVD Prevention Approaches in Estonia. Value & Outcomes Spotlight March/April 2025, pp 31-34

Macroeconomic value of a Cardiovascular Disease Prevention Program in Estonia. Short term – Base case scenario

The Social Impact of Health

- By avoiding **315 deaths** and 928 non-fatal events, the program generates **€ 127.04 mio of value** in terms of increasing paid (€ 60.1 mio) and unpaid (€ 66.9 mio) work productivity during the first 15 years.

Figure 6. Cumulative Gained Productivity – Short Term



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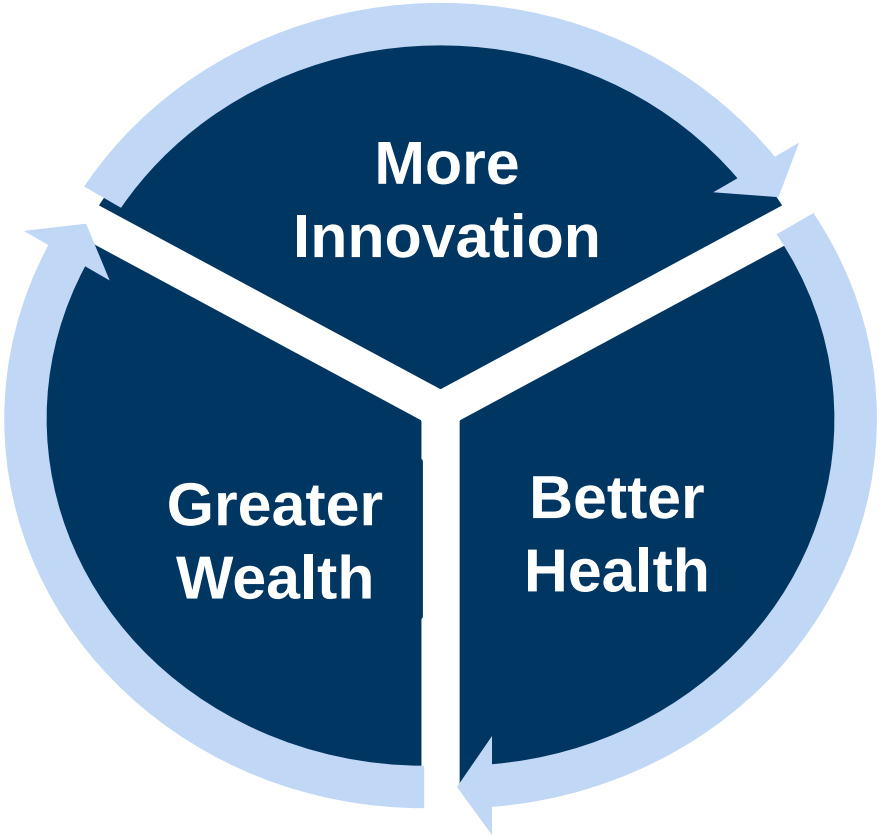
Health investments create a positive feedback loop

SDG GOAL 9

Build resilient infrastructure, promote sustainable industrialization and foster innovation



SDG GOAL 8

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

SDG GOAL 3

Ensure healthy lives and promote well-being for all at all ages

Source: own illustration. Sustainable Development Goals (UN).

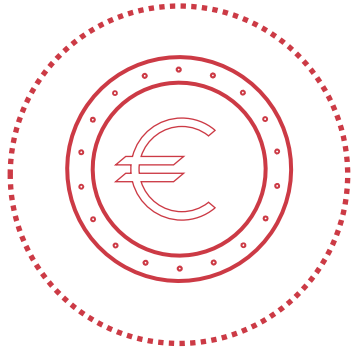
Investments in health pay off economically – in addition to health benefits, they secure jobs and generate additional value added

HEALTH & WELL-BEING

- Investments such as vaccinations, screening, and innovative treatments prevent illness and death.
- They improve quality of life and prolong life expectancy...

LABOR MARKET & SOCIETY

- ...but illness is holding back economic potential.
- Investing in health secures existing jobs and creates new ones.
- It prevents productivity losses and recovers millions of working hours.



ECONOMY & PRODUCTIVITY

- Every euro invested generates additional added value.
- Investments in health act as an economic stimulus program with a measurable return on investment (ROI).

Source: Federal Ministry for Economic Affairs and Energy (BMWE) (2022): Healthcare Industry – Facts & Figures. Results of the Healthcare Industry Accounts, data for 2022.

5

Recommendations

How can we turn lost billions into saved lives?

1. **VALUE** — Implement a national "Societal Value Mandate"
2. **Horizon** — Introduce long-term ROI-based budgeting
3. **SPEED** — Accelerate innovation access (WAIT improvement target)
4. **PREVENTION** — Increase prevention investments with guaranteed ROI (retinal disease, CVD & BC)
5. **DATA** — Strengthen Baltic data exchange & EHDS readiness

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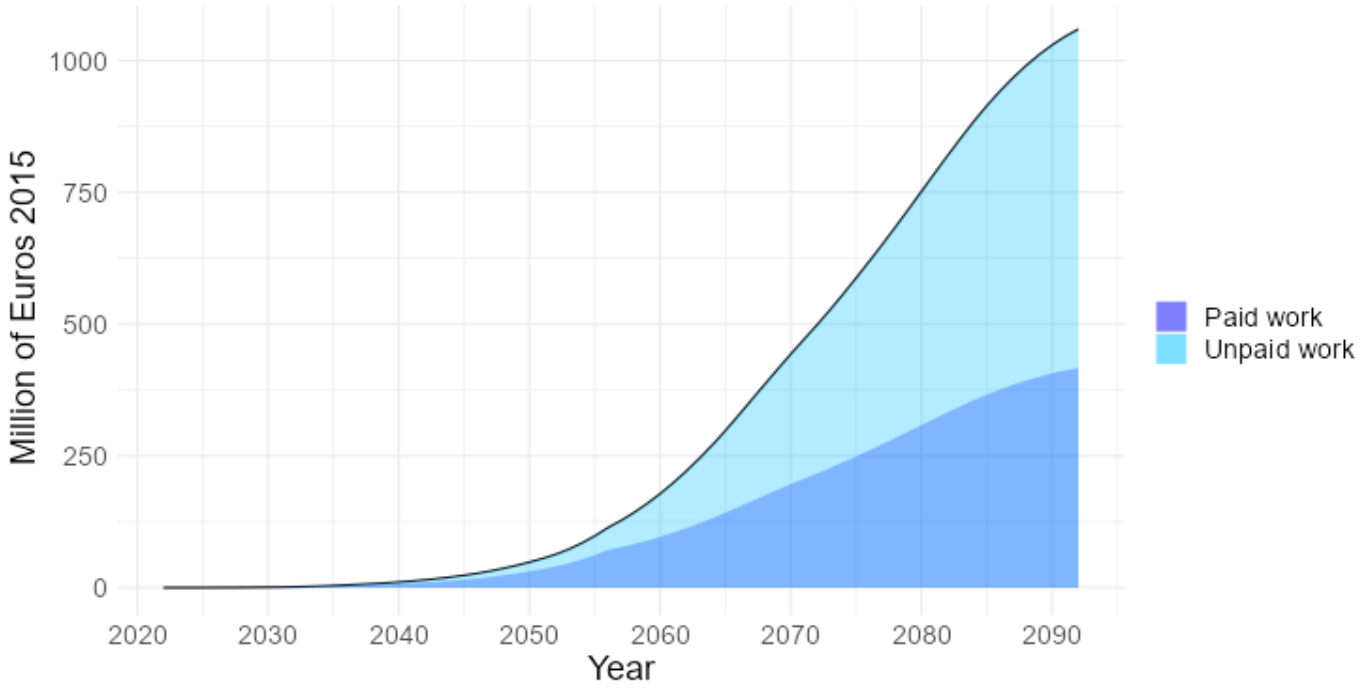
Macroeconomic value of a Cardiovascular Disease Prevention Program in Estonia. Long term – Scenario Analysis

- **The Social Impact of Health**
- Age 30 to 39 cohort **lifetime horizon**
- By enrolling in the PCVD program a cohort of 12,077 individuals between 30 and 39 years old

  - **28.708 mio productive hours** are gained in paid and unpaid activities

  - Translated into **€1,059.65 mio** of value creation.

Figure 7. Cumulative Gained Productivity in Paid and Unpaid Work Activities: 30_39 Cohort (2015 prices).



Estimations assumes that the economic variables are constant after the first 15 years.

Source: WifOR Elaboration. Hernandez-Villafuerte et al.. 2025.The Health ROI Assessor: Evaluating Novel CVD Prevention Approaches in Estonia. Value & Outcomes Spotlight March/April 2025, pp 31-34