McKinsey & Company

Digitalisering in de zorg

Dinsdag, 7 december 2021

Introductie

Onze wereldwijde Healthcare Practice

50+ Partners wereldwijd die zorgaanbieders ondersteunen bij netwerkvorming, kwaliteitsverbetering in de zorg, realiseren van besparingen in de uitvoering van de dienstverlening en operational excellence

250+ Zorgaanbieders waar we in de afgelopen vijf jaar mee hebben gewerkt, met impact op meer dan 1000 ziekenhuizen in meer dan 2500 projecten

1500+ Consultants in de zorg, waaronder 150+ artsen en onderzoekers

Paul Rutten

Partner, Amsterdam

Leider van onze Benelux zorgpraktijk

Ervaring met 10+ ziekenhuizen in de Benelux

Wereldwijd leider van onze Quality, Compliance en Remediation praktijk

Niels van Zijl

Projectleider, Amsterdam

Ervaring in opschaling digitale zorg toepassingen

Welke vragen leven er bij jullie?

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Trends in de zorg

Potentieel Digitale Zorg in Nederland

Hoe neem je zorgprofessionals mee?

Hoe kunnen we dit succesvol maken?

Back-up: Internationaal voorbeeld - Highmark Health

What are the drivers of change for healthcare globally?

Increasing patient expectations and drive to ensure more consistently high quality care

Patient experience matters

Value based health care is key

25%

Quality improvement for every 2x volume

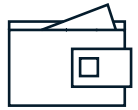
Changing health needs with more people living longer and with long term conditions

Increased requirements for care

More complex disease models

100m

People across the globe with any form of cancer (this has doubled since 1990)



Financial challenge as payors are unable/ unwilling to sustain historical growth levels

Disruptive changes and innovative providers

Integration' of healthcare

Outcomes based payment methods

80%

Business models are at risk

New treatments, new technologies

Greater global connectivity

Disruptive technologies

Personalized medicines

Genomic understanding

30%

Reduction of care in hospitals

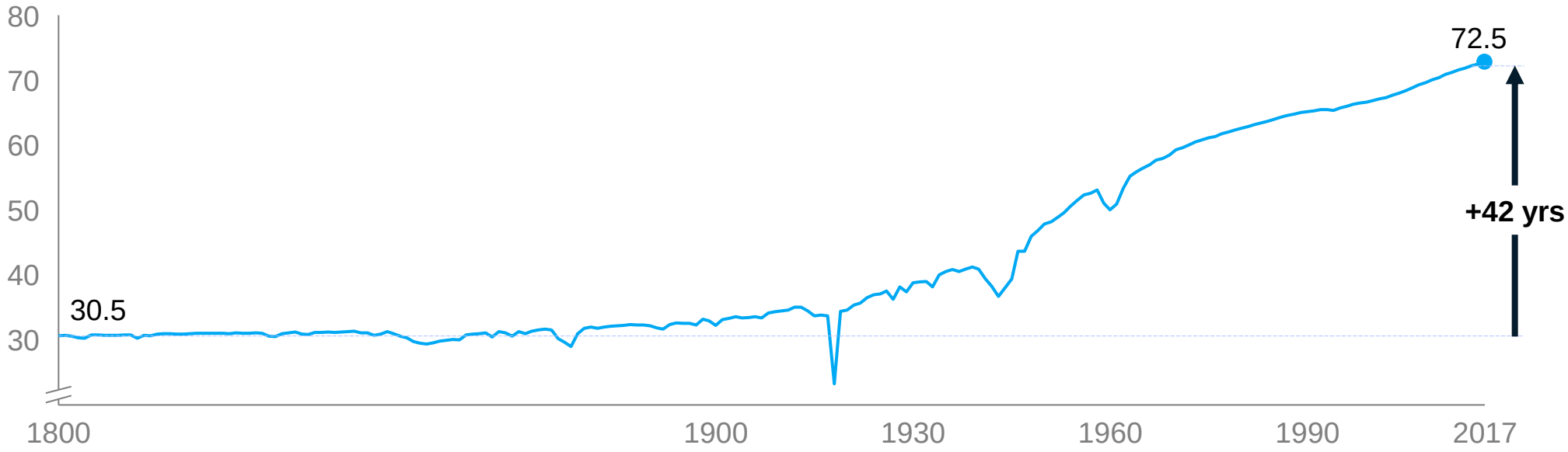
Source: McKinsey, March 2019, McKinsey Healthcare Futures Roundtable April 2019, McKinsey Global Innovation Survey

As health improved in the 20th century, life expectancy more than doubled and the global labor force expanded

Life expectancy at birth, 1800-2017

Global life expectancy at birth

Years



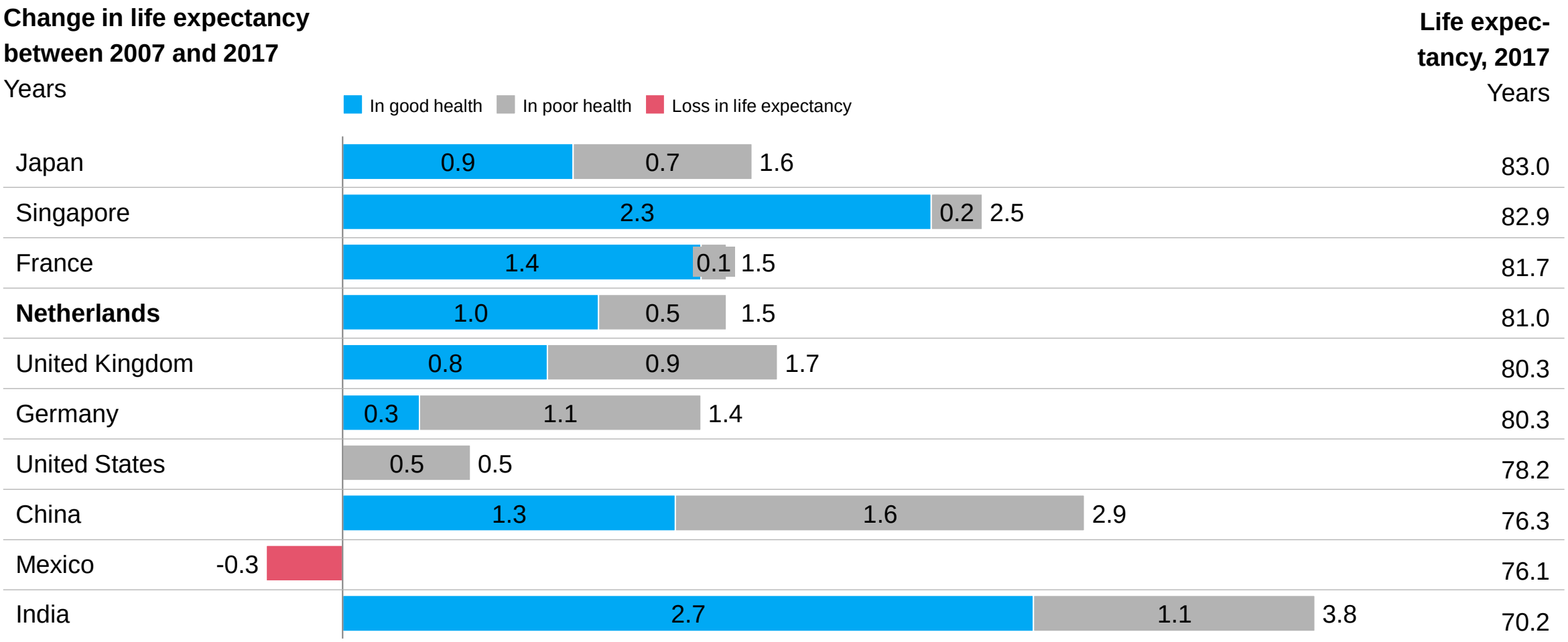
Global population

Billion

1	1.7	2	3	6	7.5

Source: Gapminder.org; McKinsey Global Institute analysis

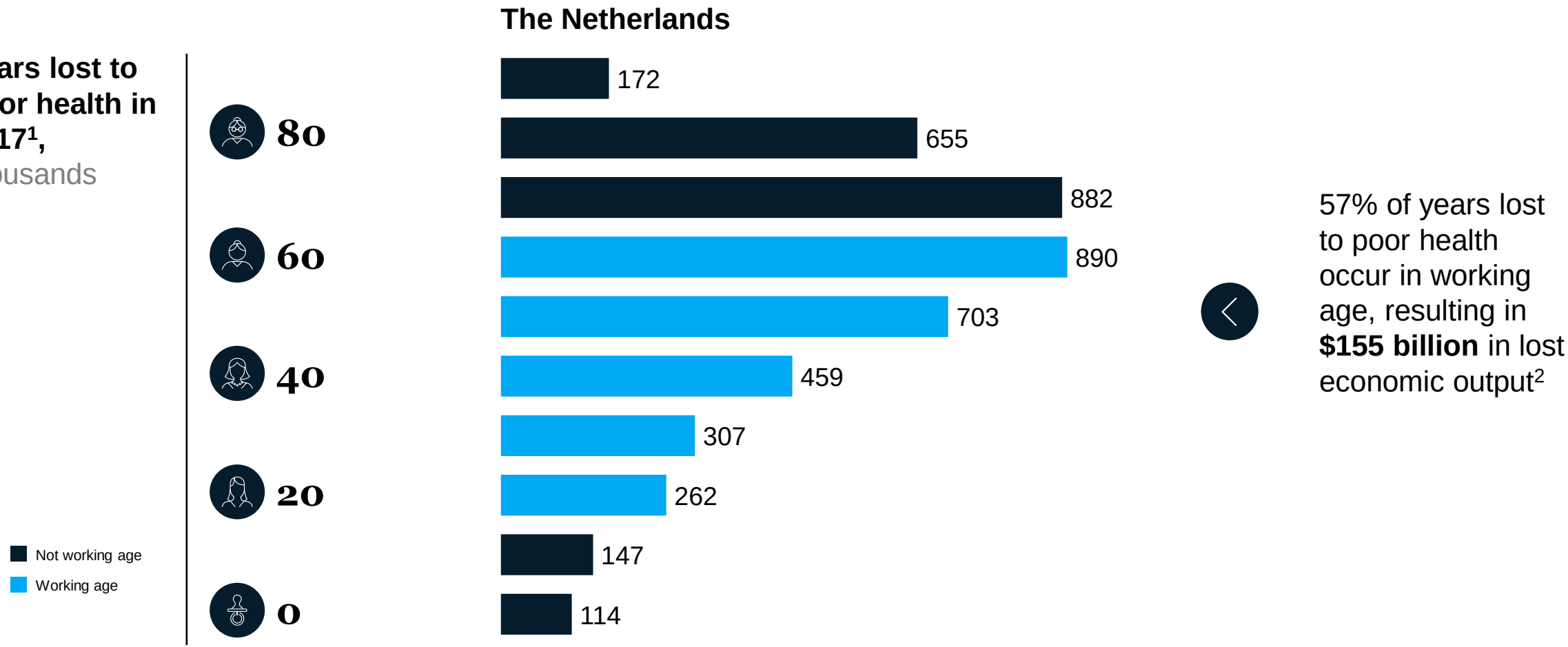
People are living longer but not necessarily in better health



1. Healthy life expectancy also called Health Adjusted Life Expectancy (HALE) is the disability-free life expectancy where years lived with disability are subtracted from overall life expectancy as a share of life expectancy.

Source: McKinsey Global Institute analysis

More than half of years lost to poor health occur in the working age population, resulting in an economic cost to the Netherlands of $155 billion a year



1. Years lost to poor health is the sum of years lived with disability and years of life lost in this year due to premature death
2. Calculated for 2017, include cost from loss of labor supply from early deaths in 2017, poor health and loss of productivity; does not include healthcare costs to address ill health

Source: Global Disease Burden Database 2016 IHME; World Bank; MGI Analysis

Two thirds of the health improvement potential from known interventions would come from environmental, social, behavioral and preventive interventions

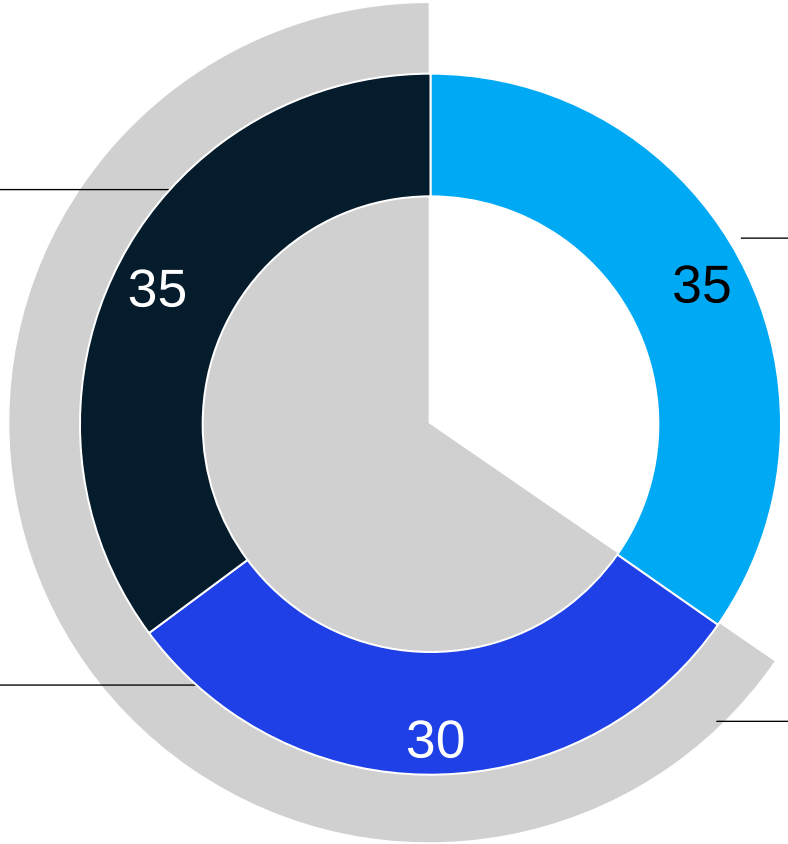
Impact by intervention type, the Netherlands, 2040

Environmental, social and behavioral

Smoking cessation	12%
Education for behavioral change	7%
Weight management and physical activity	5%

Prevention and health promotion

Medicines for heart disease, stroke prevention, and diabetes	10%
Vaccines	6%
Screening and disease surveillance	5%



Therapeutic

Physiotherapy	7%
Pain management	6%
Psychological therapies	4%

65%

Source: Global Burden of Disease Database 2017 IHME, McKinsey Global Institute analysis

Innovations in the pipeline that may enter the market by 2040 could reduce disease burden by another 20 percent

Selected examples

Omics and molecular technologies		CRISPR gene treatment of infections, e.g. malaria
Next-generation Pharmaceuticals		Senolytics and regulation of cellular aging
Cell Therapy & Regenerative Medicine		CAR-T Cell therapy for solid tumors
Innovative Vaccines		Cholesterol-lowering vaccine
Advanced Surgical		Suspended animation for severe trauma patients
Connected & cognitive devices		E-Tattoo for Heart Diagnostics
Electroceuticals		Implantable microchip mitigating chronic pain
Robotics and Prosthetics		Exoskeleton suit for mobility support
Digital therapeutics		AI-powered app to enable behavior change
Tech-enabled care delivery		Multichannel care delivery

> 20%

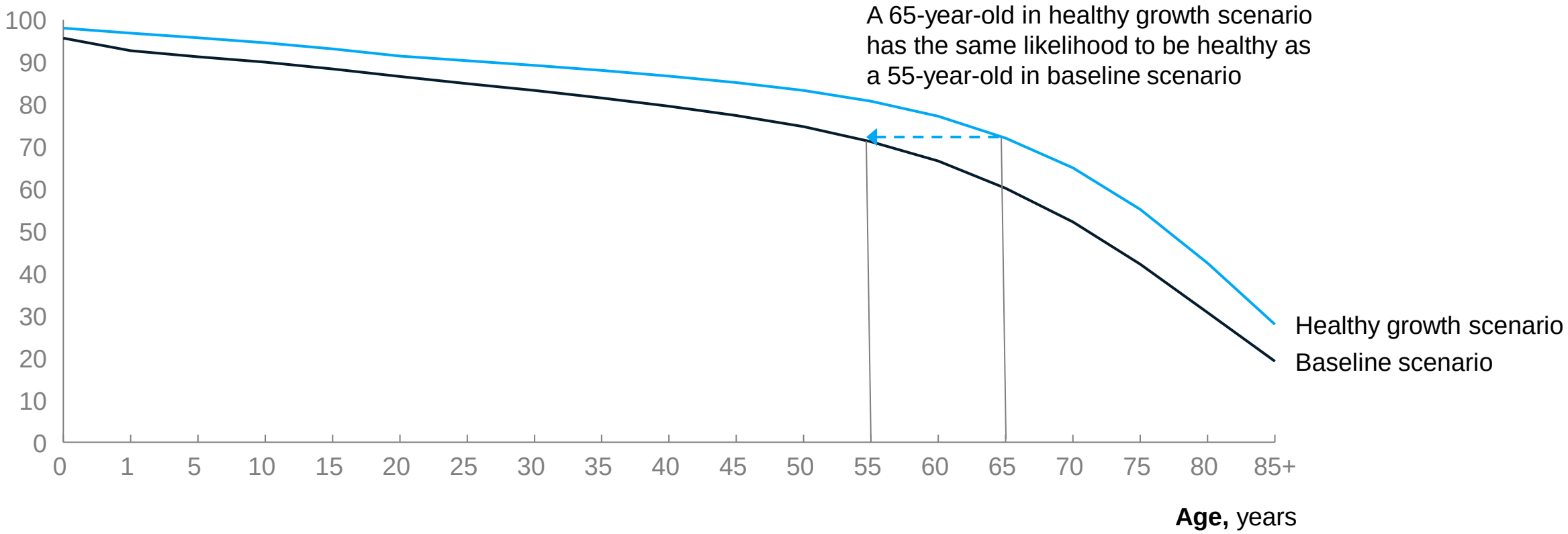
Additional reduction in global disease burden

Source: Global Burden of Disease Database 2016 IHME, MGI analysis

Given the magnitude of estimated health benefits, 65 would be the new 55.

The healthy survival curve represents the probability of survival to a selected age in good health

Healthy survival curve, global view, %[1]



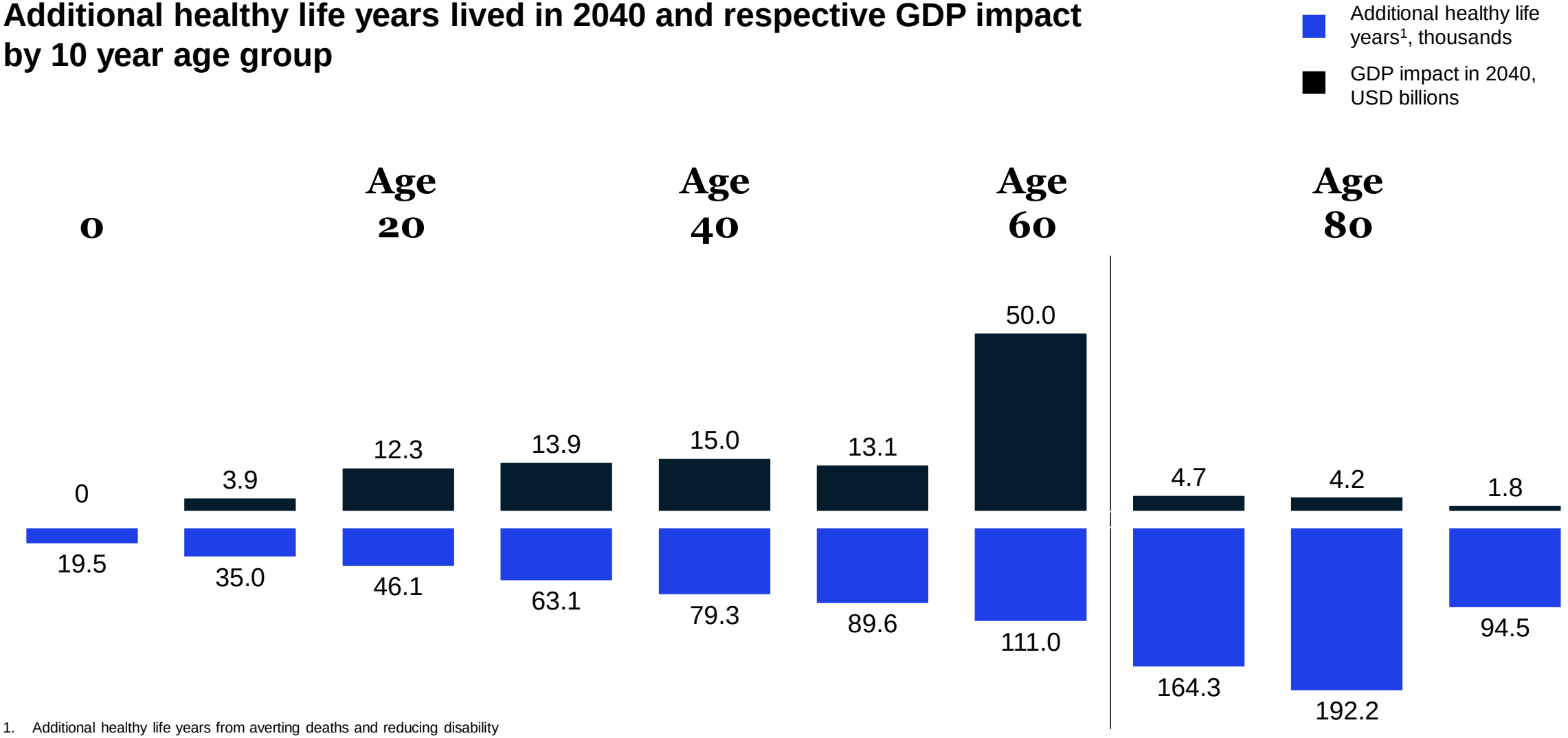
1. The healthy survival curve shows the impact resulting from decreased mortality (more people within the cohort surviving to a given age) and reduced disability. It is calculated for each age bracket as probability of survival □ (1 – disability prevalence rate).

Source: Institute for Health Metrics and Evaluation, used with permission, all rights reserved; WHO; McKinsey Global Institute analysis

Half of the potential healthy life years are added to those aged under 70 where the economic contribution is the highest

Healthy growth scenario, Netherlands, 2040

Additional healthy life years lived in 2040 and respective GDP impact by 10 year age group

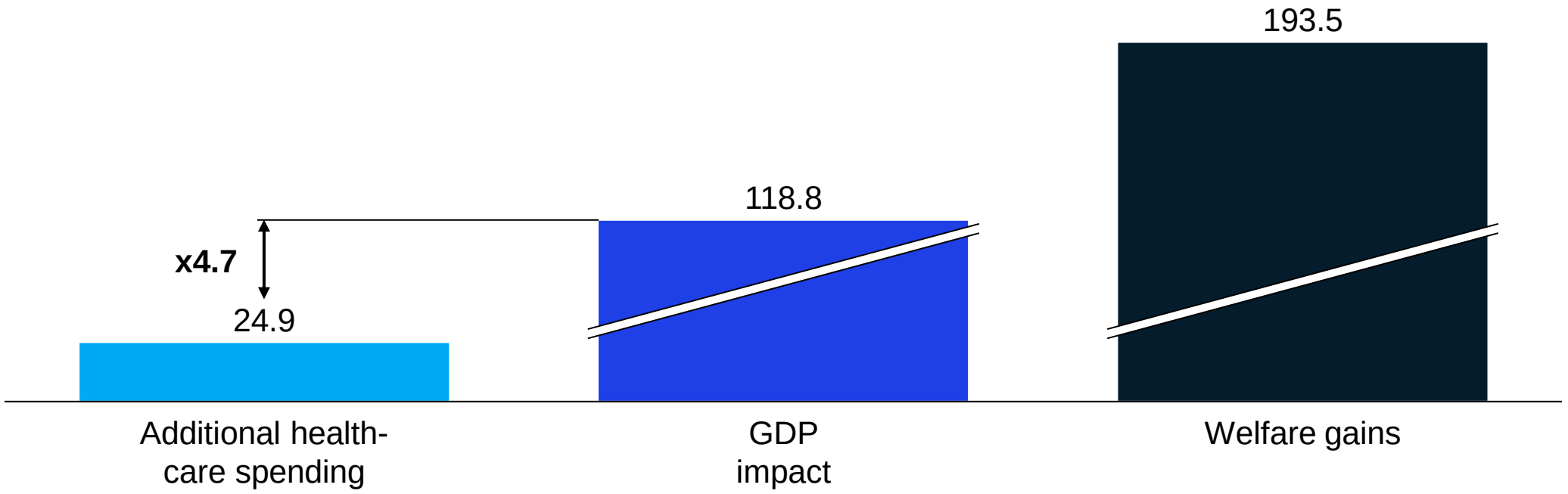


1. Additional healthy life years from averting deaths and reducing disability

Source: Global Burden of Disease Database 2016 IHME, Oxford Economics, ILO Stat, OECD, EUROSTAT, National Transfer Accounts Project, MGI Model

We estimate that for each $1 invested in improving health, an economic return of almost $5 is possible

Healthy growth scenario, Netherlands, 2040, USD billions



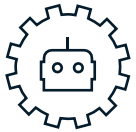
Note: Snapshot view of the healthy lifespan scenario in 2040. Additional healthcare spending, GDP impact and welfare gains account for health improvements (without expanded participation). They include both the baseline and incremental opportunity in 2040

Source: Global Burden of Disease Database 2016 IHME, Oxford Economics, ILO Stat, National Transfer Accounts Project, MGI Model, Cost per DALY averted from WHO NCD Appendix 3, DCP-3, Tufts Cost Effectiveness Analysis Registry

Hospitals are also responding to these challenges

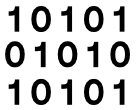
New workforce models

Physician Assistants, nurse practitioners, focused trainings



Automation

Automating manual tasks, real time management of assets, reducing variation



Applying Big Data

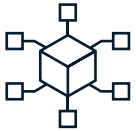
From building data ecosytems, building capabilities to cost savings

Centres of excellence

More cases, fewer complications

Shifting care out of hospital

Building retail clinics and integrated care services



Consolidation

US M&A activity doubled in 5 years

New risk share models

New models with provider pull and payor push

Source: Future of Hospitals, McKinsey

Is digital een top 3 prioriteit voor kwaliteitsmanagers?

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Potentieel Digitale Zorg in Nederland

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Back-up: Internationaal voorbeeld - Highmark Health

Digitalisering verandert de zorg waarbij het uitwisselen van gegevens een belangrijke rol speelt

Ziekte voorkomen i.p.v. genezen
Meer inzicht in preventie

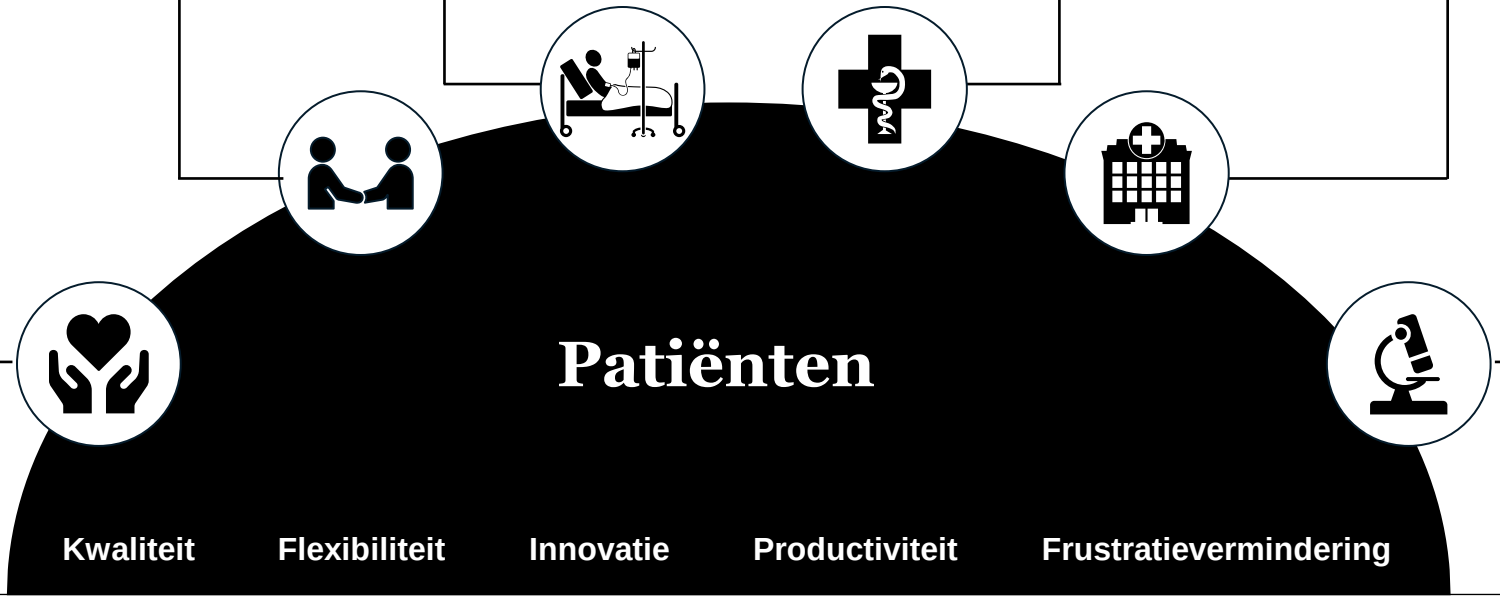
Patiënt voert de regie
over data en beslist mee in behandelplan

Optimalisatie doorstroom en overdracht van patiënten in de regio

Meer zorg op maat
op basis van data-analytics

Thuiszorg
Zorg wordt tijds- en plaats onafhankelijk

Onderzoek
wordt gevoed door zorgdata en gebruik onderzoek



Typical digital opportunities in hospital systems

Horizon 1 ("in-flight")

Development of **three categories of innovative technologies** to deliver value now:

1. **Connectivity** to enable patient co-management and provide in-person core methods
2. **Automation** to improve access and quality of care and increase efficiency
3. **Advanced Analytics** to improve end-to-end patient journey and optimize hospital management

Horizon 2 ("Maturing")

Digital-first approach to transforming user experience:

- **End-to-end transformation** of customer and patient experiences

Horizon 3 ("Emerging")

Adoption of **technological breakthroughs** to radically transform the industry:

- **Genomics** (e.g., DNA sequencing to enable personalized medicine)
- **3D printing** (e.g., customized implants and body parts)
- **Robotics** (e.g., remote surgeries)
- **Embedded wearable sensors** (e.g., remote real time monitoring of health parameters)
- **Drones** (e.g., flying drone ambulance with medicines)

Ons onderzoek concentreert zich op technieken die nu al beschikbaar zijn

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14 verschillende technologieën verspreid tussen connectiviteit, automatisering en advanced analytics

1 Connec-tiviteit

- Bewaking op afstand met sensoren
- Consult op afstand
- Zelfdiag-nostiek en advies
- Afspraak maken op afstand
- Web based zelfmana-gement
- Intensieve zorgbewaking op afstand
- Digitale preventie
- Bewaking van medicatie

2 Automa-tisering

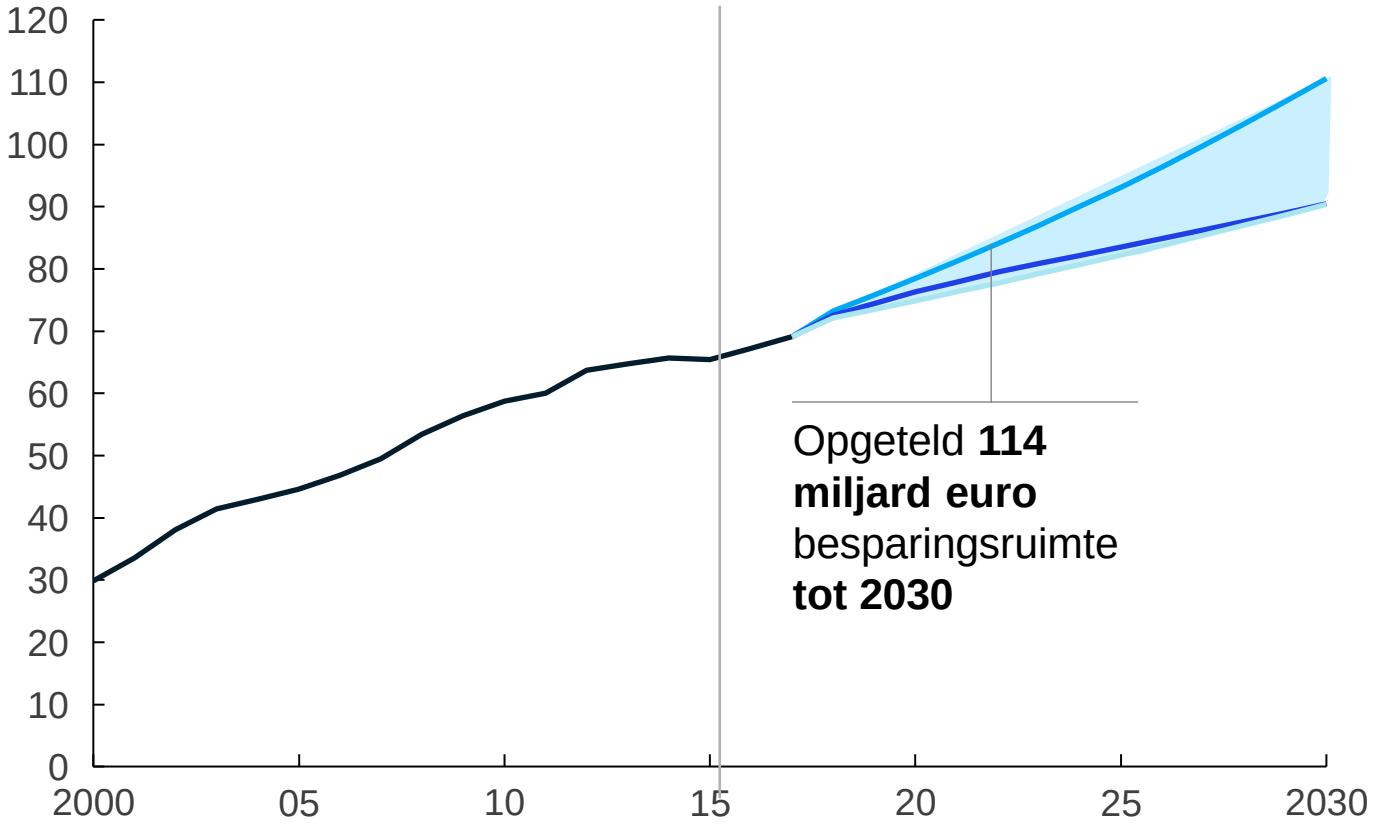
- Personeels-management in het ziekenhuis
- Geïntegreerd Elektronisch Patiënt Dossier of Data-Exchange (EPD)
- Ondersteunen-de middelen voor thuiszorg
- Optimaliseren van de doorstroom van patiënten

3 Advanced analytics

- Gegevens analyse en visualisatie tools
- Ondersteuning bij klinische besluitvorming

Deze bewezen digitale zorg technologie kan de Nederlandse zorg bruto 18 miljard euro opleveren in 2030

Kosten Nederlandse zorg
EUR miljard



Potentiële bruto besparing vanaf 2030

€ 18 mld

(~18%)

- Historische groei zorgkosten[1], geëxtrapoleerd
- Historische groei zorgkosten met Digitale Zorg
- Huidige voorspelde groei BBP

1. Uitgaande van een voorspeld BBP van 1,9% per jaar en stijging van de zorgkosten met 1,6% per jaar (gebaseerd op groei van tussen 2012 t/m 2017)

BRON: McKinsey analyse “Digitale Zorg in Nederland: Gezondheid en zorg van morgen beter, goedkoper en meer patiëntgericht " – 2018-2019

Aan welke technologie hebben jullie het meeste behoefte?

Technologie met focus op connectiviteit kent grootste potentieel

Technologie	Schatting bruto besparing 2030 EUR miljard
Connectiviteit	
1. Bewaking op afstand met sensoren	
2. Consulten op afstand (e-consulting)	1,8
3. Zelfdiagnostiek en advies	0,8
4. Afspraak maken op afstand (e-booking)	0,5
5. Web-based zelfmanagement	0,4
6. Intensieve zorg bewaking op afstand (eICU)	0,4
7. Digitale preventie	0,3
8. Bewaking van medicatie	0,3
Totaal connectiviteit	7,6
Automatisering	
9. Personeelsmanagement	2,8
10. Geïntegreerd EPD	2,4
11. Ondersteunende middelen voor thuiszorg	1,4
12. Optimalisatie van de doorstroom van patiënten	0,4
Totaal automatisering	6,9
Advanced analytics	
13. Gegevens analyse en visualisatie tools	1,9
14. Klinische beslisondersteuning	1,6
Totaal Advanced Analytics	3,5
Total	17,9

BRON: McKinsey analyse “Digitale Zorg in Nederland: Gezondheid en zorg van morgen beter, goedkoper en meer patiëntgericht " – 2018-2019

Grootste deel besparingen door connectiviteit oplossingen (42%)

€ 9,5 miljard (53%) van totale potentieel bespaard op ziekenhuiszorg

Investeringsbehoefte en vraag naar digitaal talent bekostigd uit bruto besparingen

Wanneer zorgverleners dit niet nu samen oppakken heeft dit consequenties

1

Afhankelijkheid van leveranciers zij bepalen de snelheid en mate van flexibiliteit en functionaliteit

2

Zorgverzekeraars en andere ziekenhuizen zullen mogelijk de regie gaan voeren

3

Individueel ontwikkelde platformen en systemen sluiten niet op elkaar aan

4

Informatie uitwisseling bemoeilijkt maar speelt een steeds grote rol in de overwegingen van verwijzers

5

Concurrentie van zorgaanbieders neemt toe terwijl coördinatie van zorgfuncties belangijker wordt

6

Zorgkloof[1] en Innovatiekloof tussen wetenschap en praktijk blijft of neemt zelfs toe

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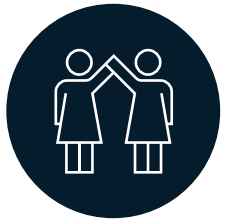
Back-up: Internationaal voorbeeld - Highmark Health

Ervaringen laten 5 belangrijke elementen zien voor het meekrijgen van zorgprofessionals bij digitale transformation

Plaats de **patiënt** centraal

Besteed aandacht aan **cultuur** (niet techniek)



Ontwerp oplossingen **samen** met de zorgprofessional

Focus op het **waarom**

Verander **standaard manieren** van werken (Agile, Lean, Design thinking)

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Wat zou de Digitale transformatie kunnen versnellen?

Interviews in Nederland laten 3 grote barrières zien om Digitale Zorg grootschalig uit te rollen

Belangrijkste barrières	Waarom is dit een barrière?
1 **Sector overstijging**	Perverse prikkels bij sector overstijgende oplossingen doordat investeringsbehoefte en kostenbesparingen op verschillende plaatsen in de keten zitten
2 **Data & privacy**	Trage voortgang op het gebied van data standaarden en heldere privacy wetgeving
3 **Agile manier van werken**	Gebrek aan Agile manier van werken in gezondheidszorg met onvoldoende digitale vaardigheden en capaciteit

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Highmark Health, a leading integrated care system, transitioning to an analytic- and virtual health-enabled model

Context

One of the largest integrated care systems in the US, consisting of

- Health insurance plan for ~6M people
- Integrated provider network, including primary care, community-based outpatient centers, 10 hospitals, and post-acute care
- 40,000 employees
- Technology/analytics service company

Not for profit, with a mission "to create a remarkable health experience, freeing people to be their best"

Examples of impact

6% savings in cost of care for high risk patients (resulting in improved quality and >$150M in total cost of care savings within 24 months of care models being deployed)

3% network-wide reduction in avoidable ED through clinical case management outreach

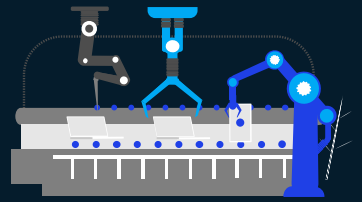
"360 view" of patients with over 10K pre-curated variables driving real-time scoring engines across millions of members to determine clinical interventions

$75M admin savings through "local sprints" based on crowd-sourced ideas of how to apply digital and analytics to improve current business processes

The story of the Living Health platform

Initial excitement around building the first pilots

Realization that infrastructure & people and culture to scale were not in place



Long foundation building phase

Core technology infrastructure investments and capability building

Relative slow deployment of first use cases using new approach

Partnership needed to accelerate the transformation, culminating in 6-year partnership with GCP and Verily Health

Pace of organic build out

Overview of the elements of the Highmark Health journey

People and cultural transformation

Visible leadership articulating a clear vision

Building key capabilities and skillsets (design thinking, agile, digital, analytics)

thinkUP (organization-wide culture change effort around digital and analytics)

Core data and analytics infrastructure

Integrated member & patient data (“Member 360”) and “member listening system”

Internal and external interoperability

Modernizing core data and analytics tools and infrastructure

Deploying high impact use cases

New integrated clinical models (e.g., high cost members)

Integration of digital point solutions (digital ecosystem) to address patient needs

Advancements in modelling capabilities

“Living Health” platform

Seamless digital front end

Real-time clinical intervention scoring engine integrated into workflows

Robust portfolio of clinical programs deployed when needed

thinkUP was launched as an enterprise culture change effort

- Originally launched as a culture change initiative
- However, quickly pivoted to include direct enterprise support for short-term projects relating to digital, analytics, robotic process automation etc. (“local sprints”) to improve existing core operational processes. Business owners “split” savings impact with finance
- Resulted in $75M in verified admin savings – but more importantly, exposed broad parts of the organization to new ways of working and created change champions at multiple different levels of the organization

Advanced analytics & digital enabled new care models

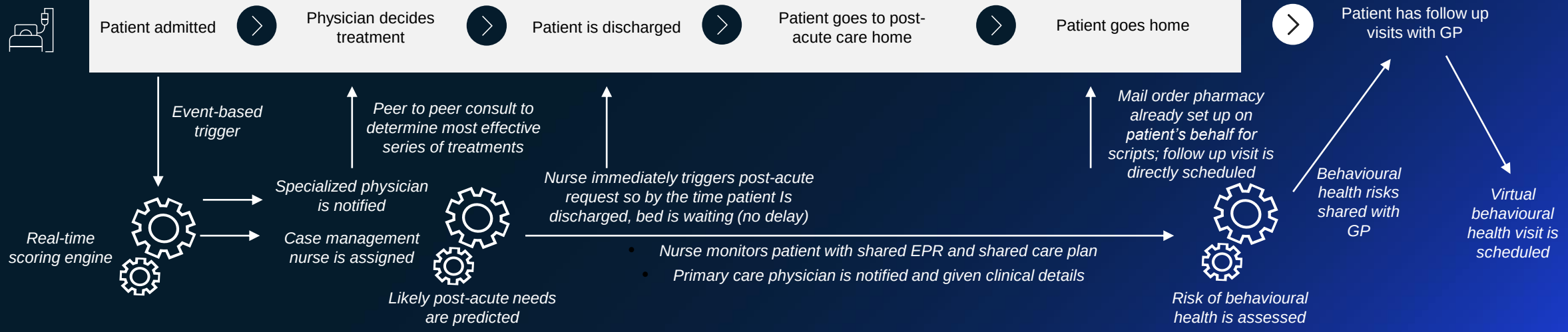
Old pathway: Patient with a serious chronic condition requiring in-patient care

Patient admitted → Physician decides treatment → Patient is discharged → Patient goes to post-acute care home → Patient goes home

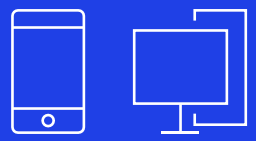
- Process led by central design and analytics team
- Team worked hand-in-hand with clinician leaders, informed by data on points of opportunity
- MVP of initial design requirements were implemented via agile
- Full-scale implementation was centralized to enable at-scale deployment across the network

New pathway: Patient with a serious chronic condition requiring in-patient care

Patient admitted → Physician decides treatment → Patient is discharged → Patient goes to post-acute care home → Patient goes home → Patient has follow up visits with GP



Current focus: Virtual health platform



Consistent patient experience across mobile and portals that serves as the “front door” into clinical and select administrative journeys

At-scale personalization engine that serves up specific clinical interventions (“next best action”) at the right time based on an individual’s unique characteristics and needs

Seamless integration and triggering into appropriate virtual or physical clinical care model, with common patient care plan (with supporting interoperability) to ensure coordination across programs

Cloud based data infrastructure and suite of advanced analytic tools with strict privacy and data governance that enable the ongoing build out of new data sources, leading edge analytics, and co-development with partners