



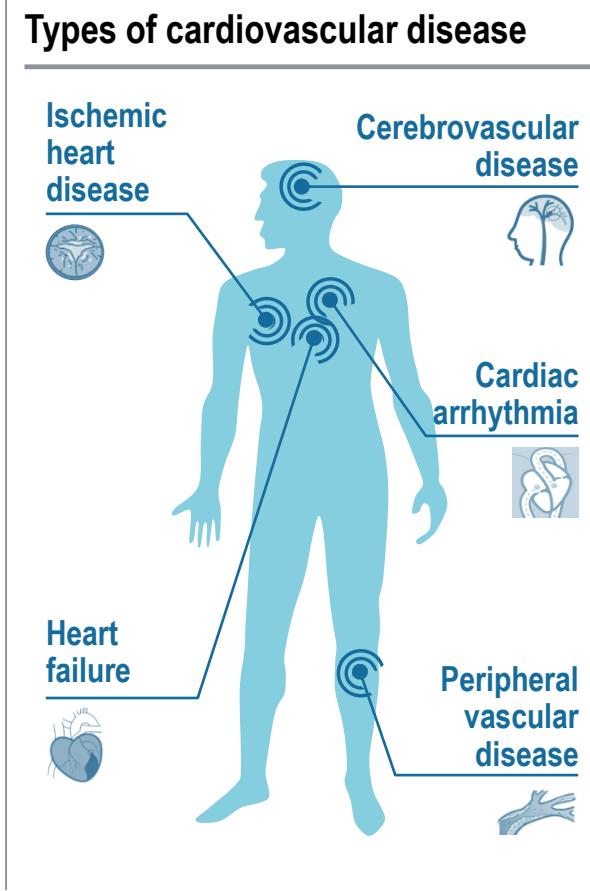
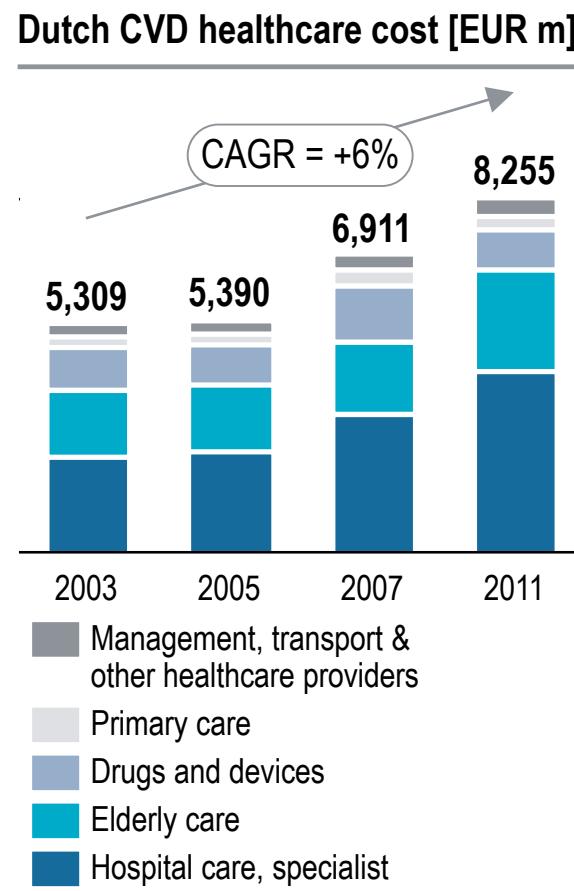
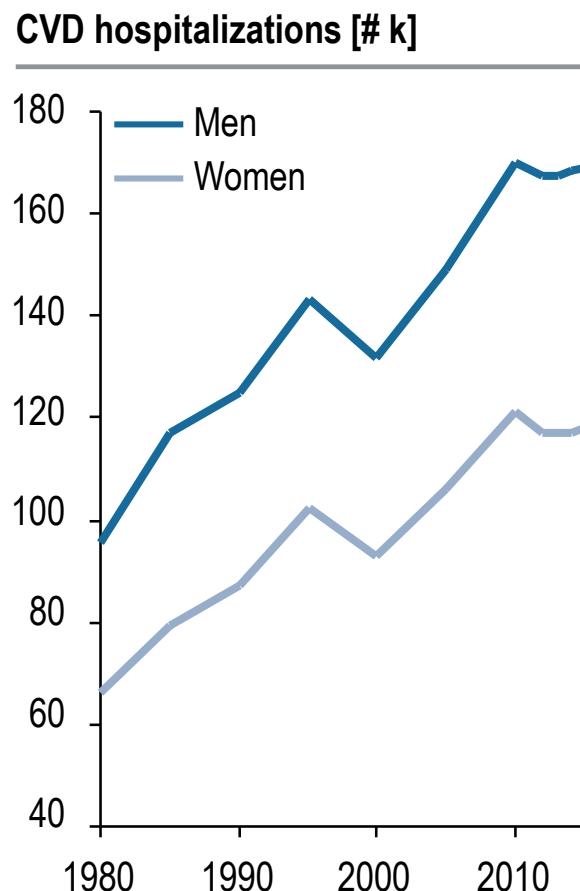
Early recognition of cardiovascular disease:

The
Dutch
CardioVascular
Alliance
initiative



Cardiovascular diseases are on the rise

DRAFT - CONFIDENTIAL - WORK IN PROGRESS



The Dutch CardioVascular Alliance is a movement of the cardiovascular community in the Netherlands

Movement of ...

... to



Mobilize **EUR 1 billion** ...

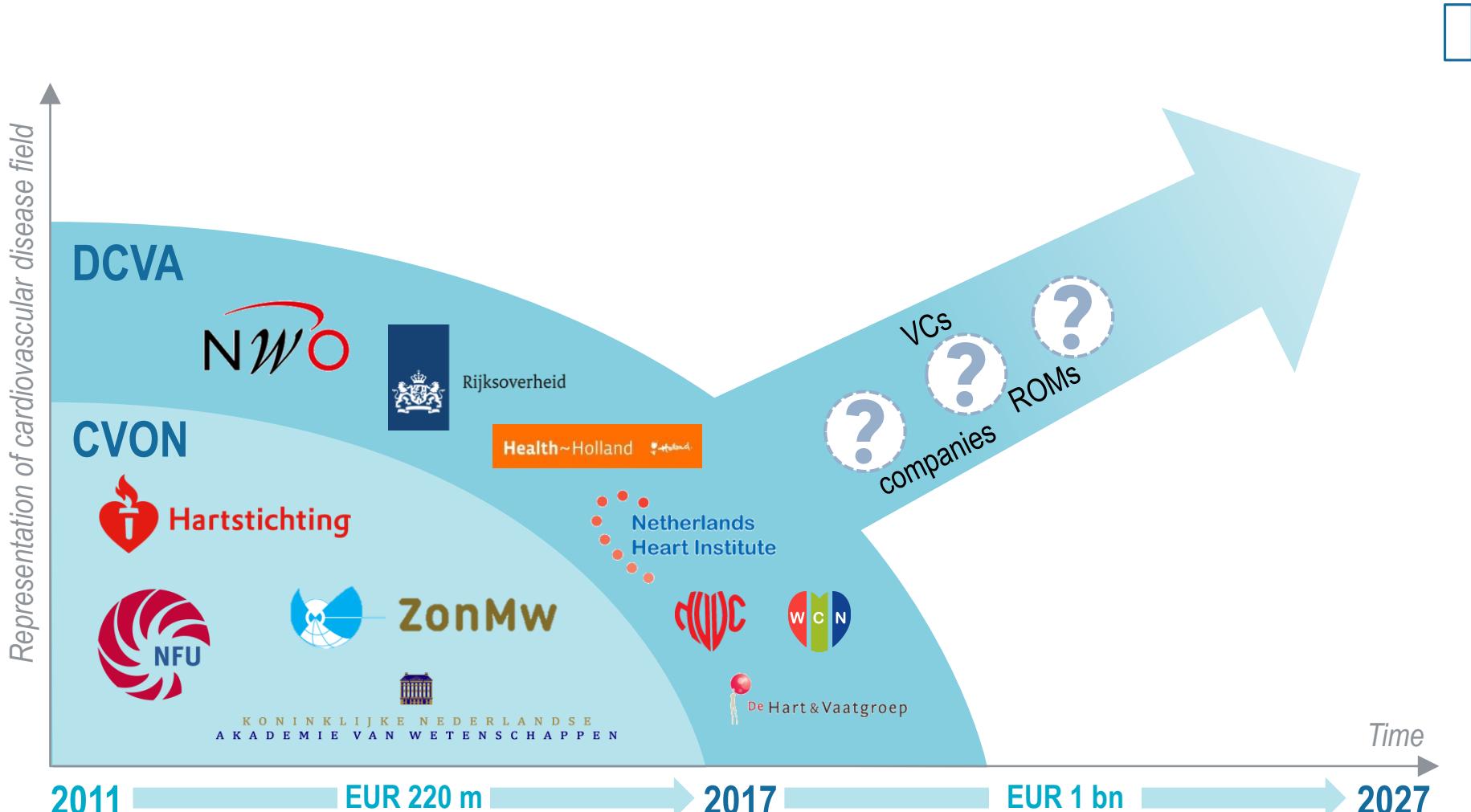
... **for early recognition** of cardiovascular diseases ...

... thanks to **excellent science** in the Netherlands ...

... that is rapidly translated into **health solutions, lowering** the cardiovascular disease **burden by 25%**

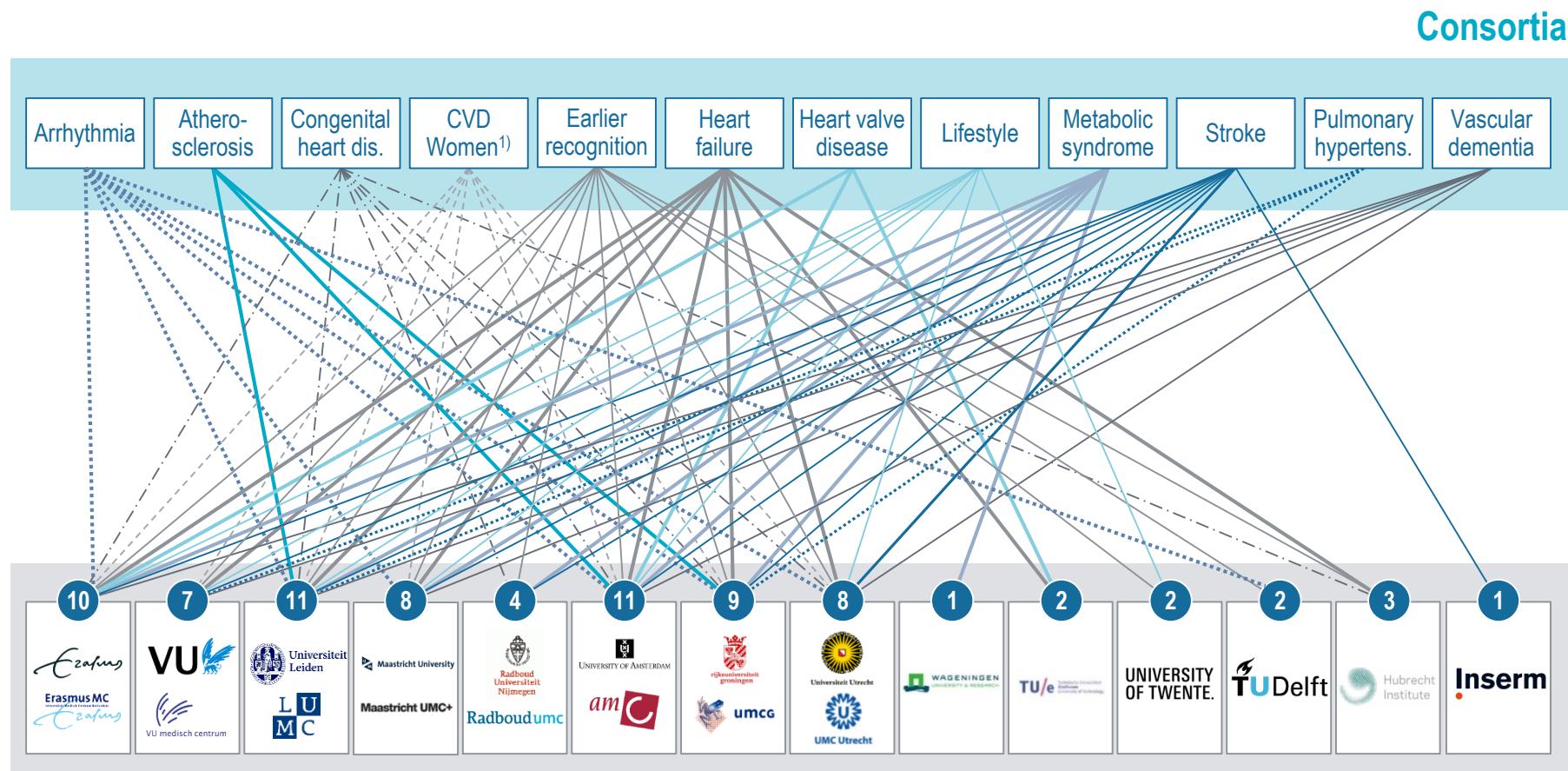
Rijksoverheid 
1,000 researchers
100 PIs
10 years plus
1 billion Euro

With CVON, Hartstichting, NFU, KNAW, ZonMw and TTW (STW) invested EUR ~220 m in cardiovascular research over ~5 years



CVON has been successful in building national cardiovascular research communities around priority subjects in CVD

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1) Not official CVON consortium, but strong connection exists

We are proud of the achievements, but believe much more impact can be achieved

Excellent position to build upon ...



Excellent scientific community brought together through the CVON initiative in research communities

... because more impact is possible



- > Research consortia often designed around scientific potential, and less geared towards achieving social and economic impact
- > Research is often inter-university, while valorization support, talent development and data infrastructure is organized per university and sub-critical
- > Potential for increased public and private co-financing to scale up CVD research and innovation



The DCVA builds on existing assets and improves the innovation infrastructure

DCVA to invest in an excellent and sustained environment for CVD breakthroughs

Dutch CardioVascular Alliance

Science

Breakthrough science by leading scientists who cooperate in a long-term programmatic research agenda



Valorization & implementation

Fast-tracks from project to company, lab to patient, driven by offering inspiration, expertise and funding



Talent

Excellent talent development opportunities, and continuous exchange of talent between communities



Communities

Sustained and focused public-private communities that work together on solutions with patients



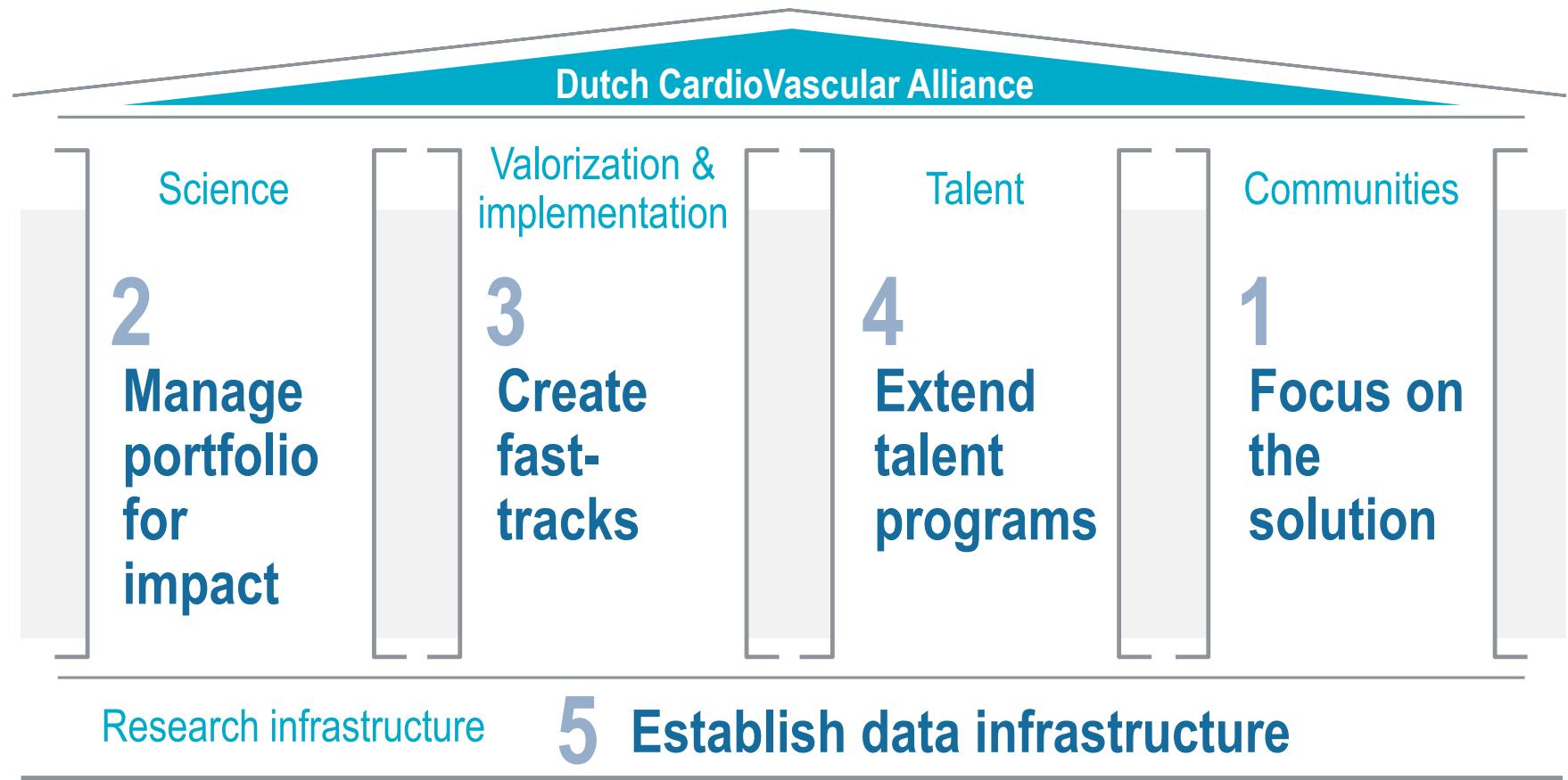
Research infrastructure

Shared, national research infrastructures that provide the best facilities and associated expertise to researchers



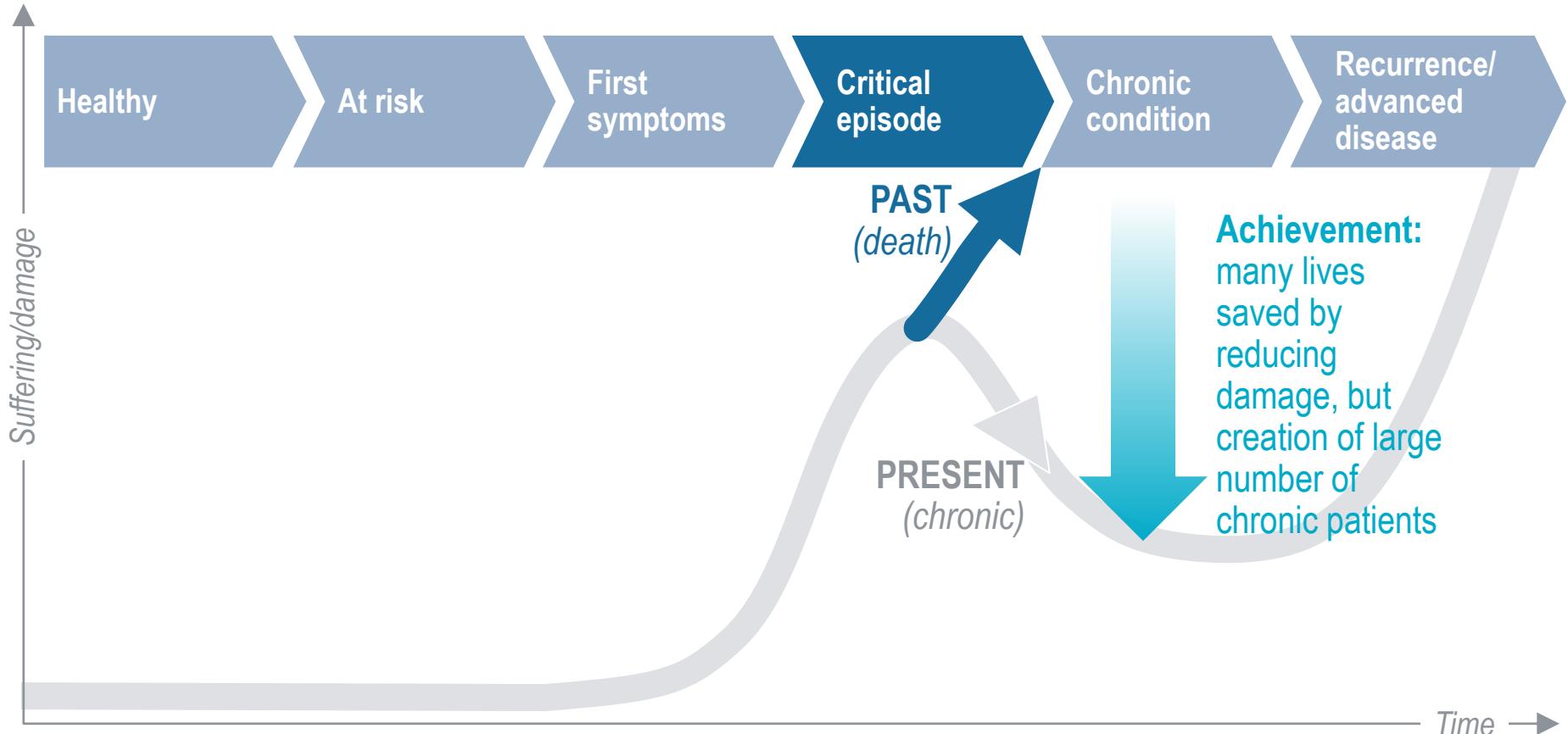
DCVA initiates five actions, getting shape in the coming period

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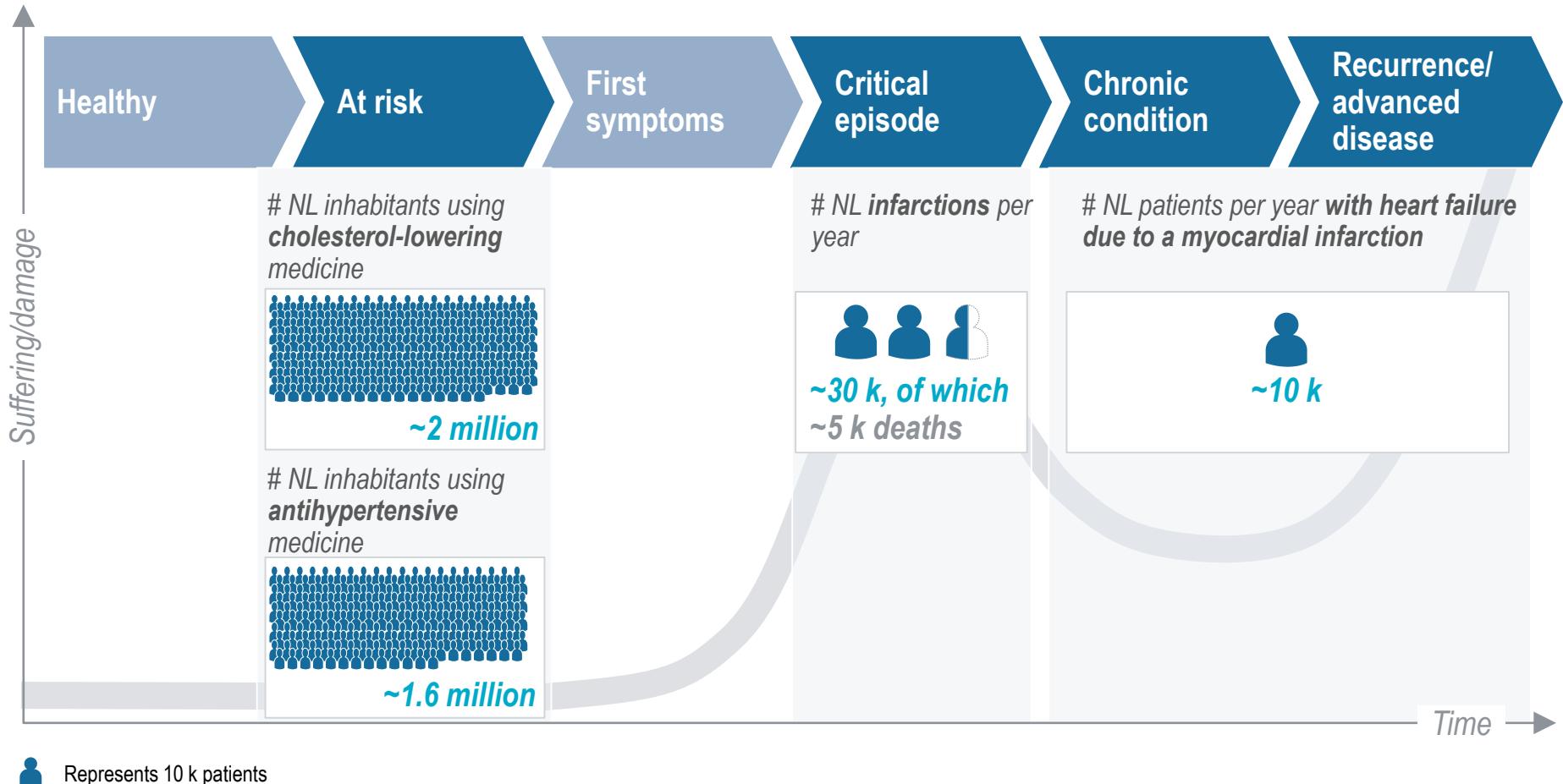


Innovation by the CVD community has saved many lives, but has created many chronic patients in turn

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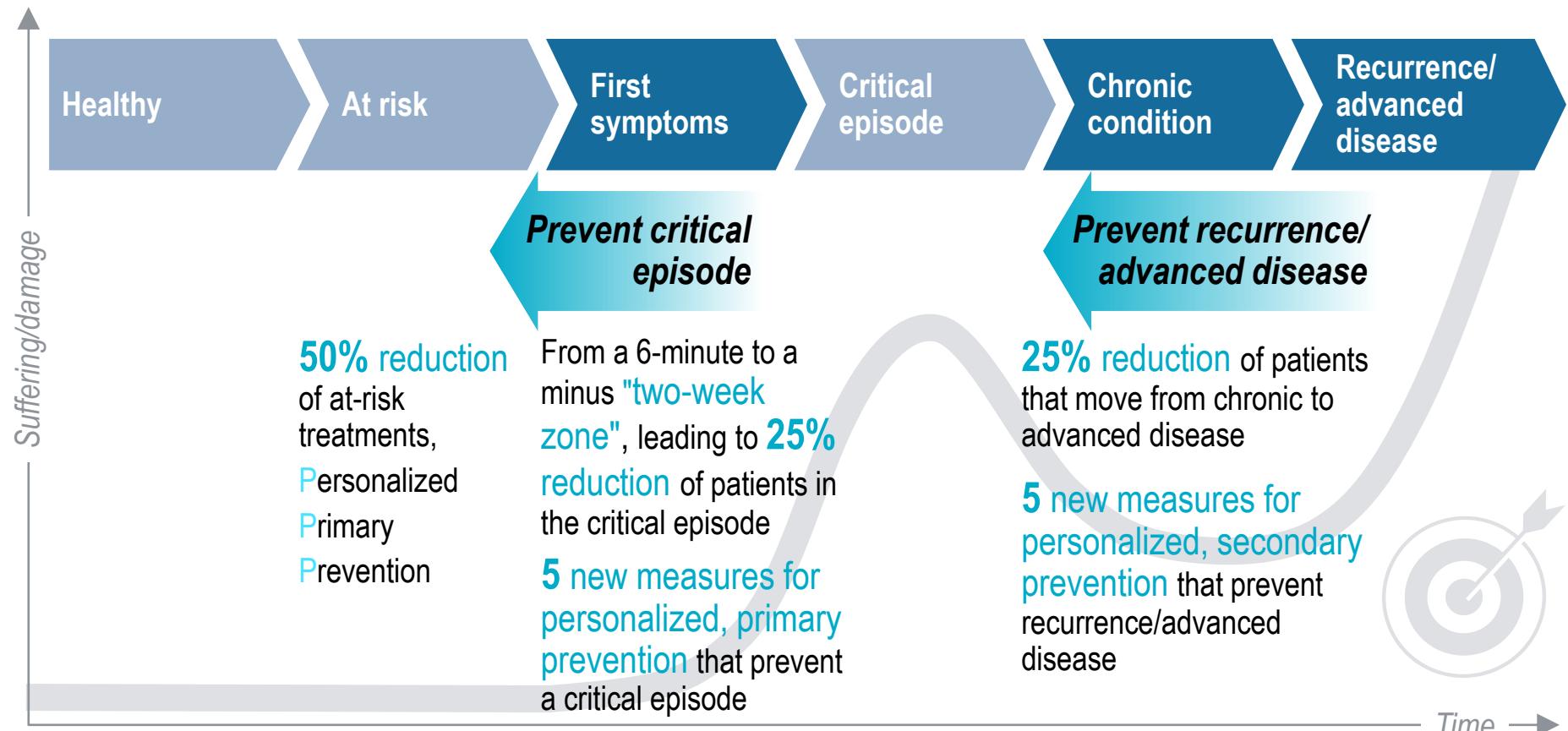


In the Netherlands, millions are taking medication to lower their CVD risk, and 25 k people with myocardial infarction survive each year



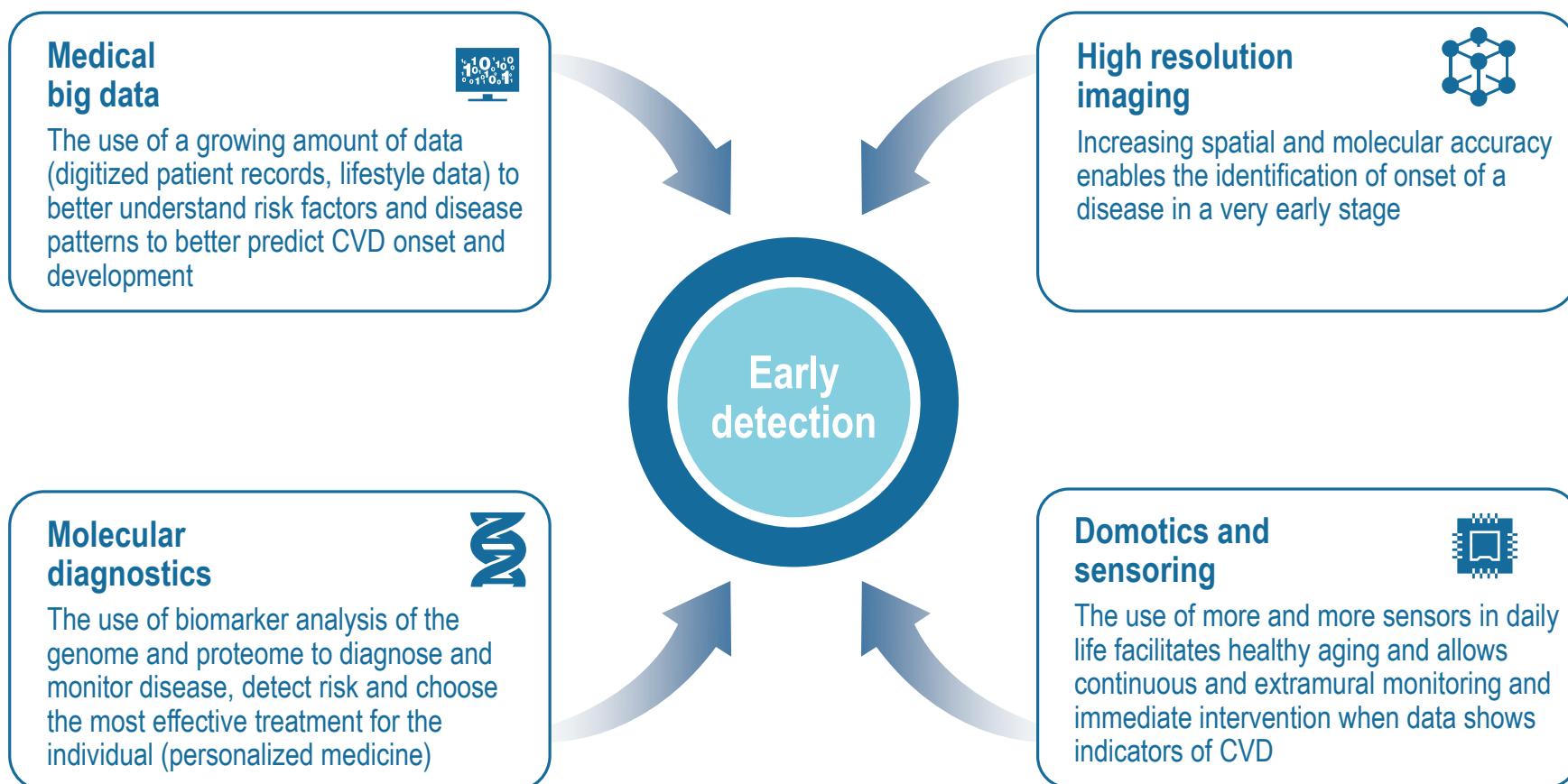
DCVA aims to counter the growth of CVD prevalence and costs by taking action before real damage has occurred

CVD in 2030



Technological progress is providing tools for developing and implementing early detection and associated intervention

Early detection facilitators



Co-creating a Research Agenda

**Donors,Volunteers &
Dutch society**



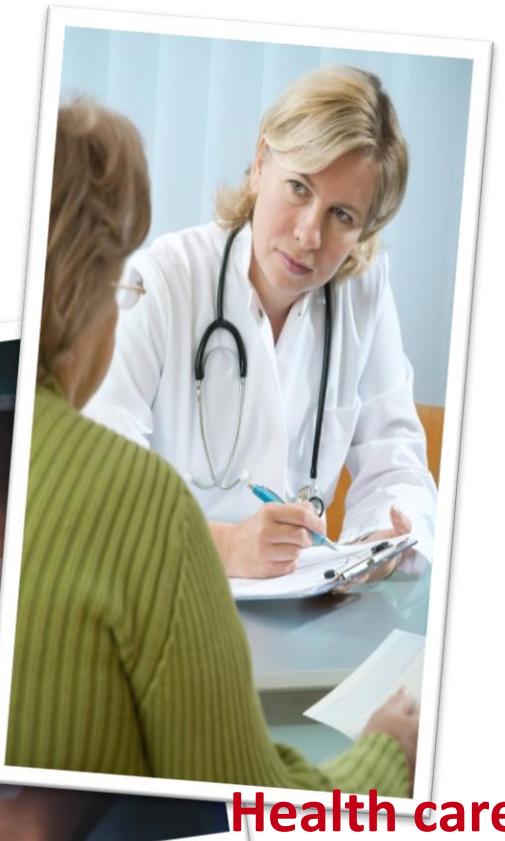
De Hart & Vaatgroep
VAN EN VOOR MENSEN MET EEN HART- OF VAATZIEKTE



**Patients and their
families**



Scientists



**Health care
professionals**



Co-creating the Research Agenda for Cardiovascular Diseases



- 1. Earlier recognition of cardiovascular disease**
- 2. Cardiovascular disease in women**
- 3. Better treatment of heart failure and arrhythmias**
- 4. Acute treatment of strokes**
- 5. New ways to keep up a healthy lifestyle**



With its focus on early detection, the DCVA executes two of the NWA routes ...

NWA routes executed by DCVA

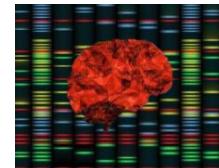


Route: Personalized medicine

- > Exactly the right amount and type of care for every individual patient, at minimal cost, close to home
- > To make this possible for the growing number of patients with a chronic disease, a healthcare revolution is needed
- > It demands large investments in data infrastructures and technological and methodological developments, and new cooperations

DCVA:

- > Takes a personalized approach in early detection, understanding the exact risk factors of an individual for developing a critical episode or the advancing of a disease
- > Invests in data infrastructure to build the basis for understanding disease risks factors and progression based on genotypes and phenotypes
- > Brings together a range of public and private parties to jointly innovate and improve healthcare



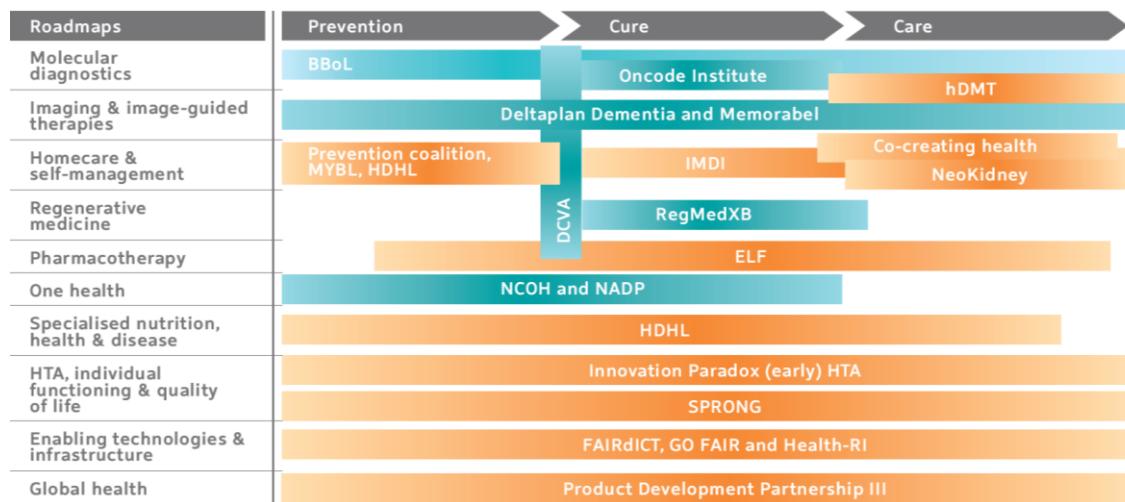
Route: Healthcare research, prevention and treatment

- > Healthcare faces major challenges and focuses on prevention, early diagnosis and effective, minimally invasive, treatment of chronic diseases
- > The big challenge is to keep healthcare affordable, accessible and of high quality. Sustainable healthcare demands a multidisciplinary approach with all stakeholders, supported by technological advances and sharing of data and results

DCVA:

- > Targets one of the major chronic diseases that threaten health and sustainable healthcare (cardiovascular diseases) through early recognition, providing the tools for prevention, early diagnosis and effective, minimally invasive, treatment
- > Develops breakthrough technologies to achieve this, and does this in a consortium effort that enables the collection and use of data and results to drive breakthrough research, and as a multidisciplinary cooperation

The DCVA is a flagship project within the topsector Life Sciences & Health and integral part of its agenda's



Within the Regiegroep of the topsector Life Sciences & Health, the DCVA has been identified as one of a few Flagship projects of the topsector

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Backup slides

Portfolio management will be guided by measuring and evaluating societal, valorization, implementation and scientific impact

Performance indicators

SOCIETAL IMPACT

- > **Promise** of end goal: # patients, impact per patient, and impact on affordability of healthcare
- > **Feasibility** of end goal: ability (quality) to achieve end goal, risks, distance towards end goal (years)
- > **Progress** made towards end goal; milestones of the roadmap achieved and years towards end goal lowered
- > # projects in **implementation fast-track**



ECONOMIC IMPACT

- > **Private funding** acquired
- > # of **spin-off** companies
- > # of projects in **valorization fast-track**
- > # of **clinical trials**



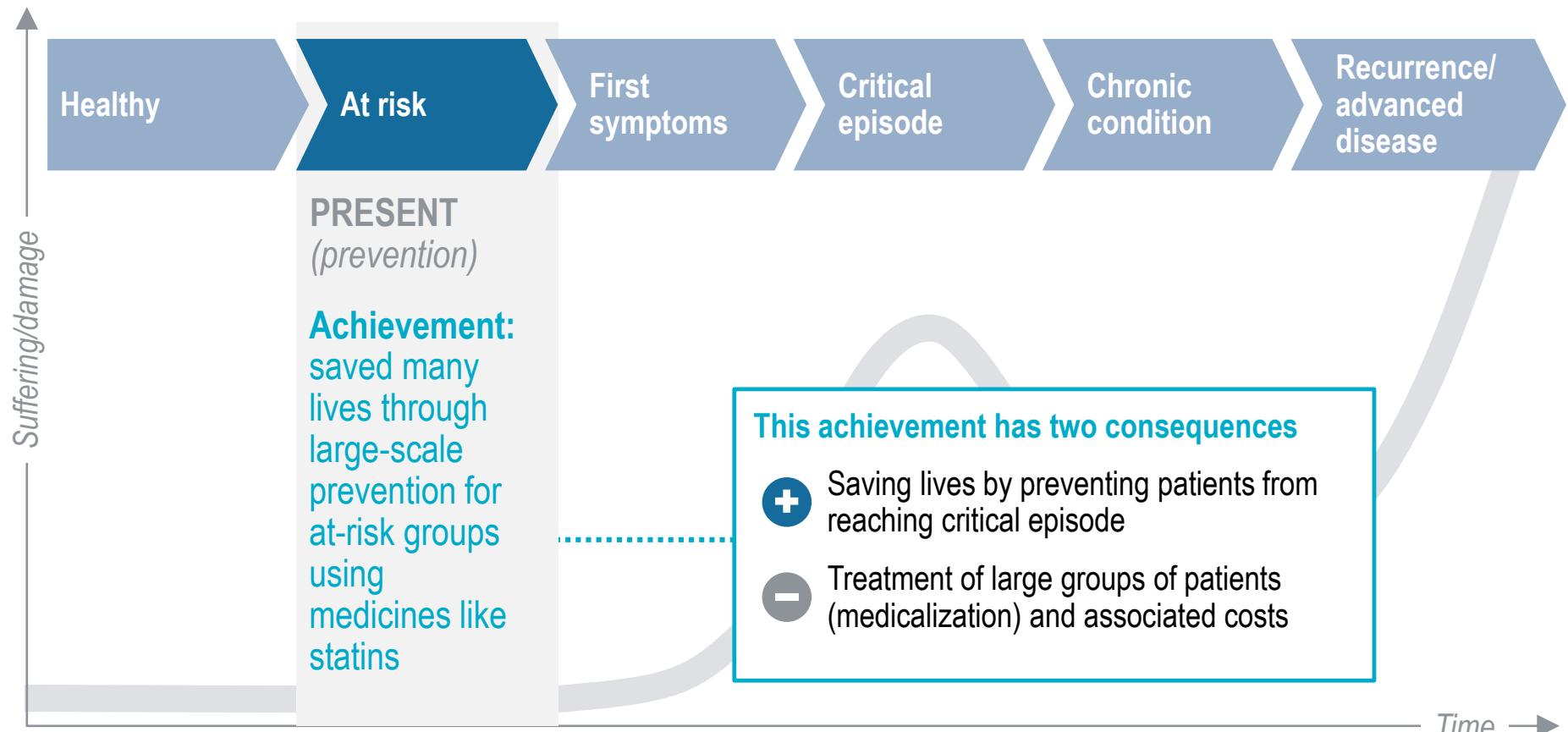
SCIENTIFIC IMPACT

- > # of **publications**
- > **Impact** of publications (e.g. citations per article / # articles in top 10% journals)
- > **Public funding** acquired



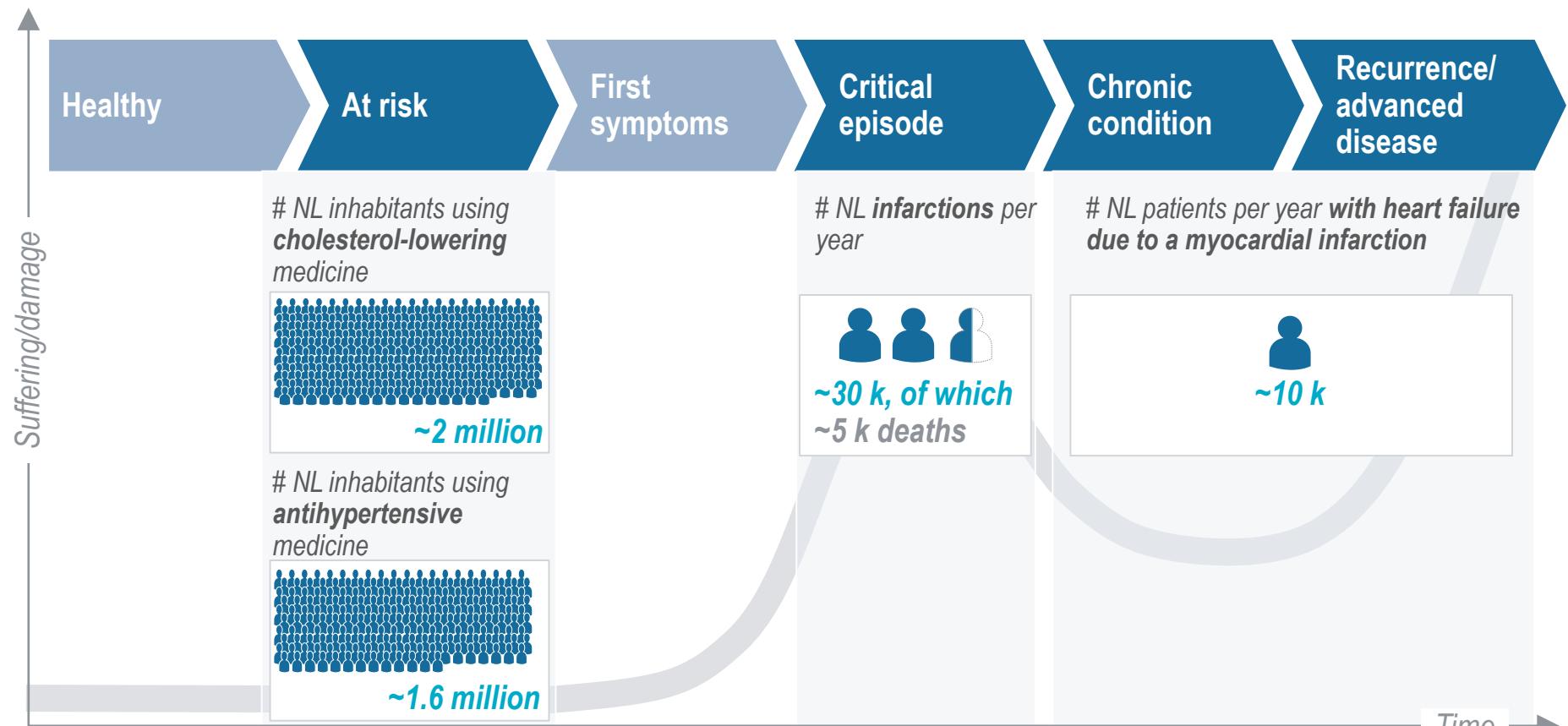
Focus on large-scale prevention for at-risk groups has prevented many diseases, but has led to a medicalized society

Achievements of the CVD community in recent decades (2/2)



In the Netherlands, millions are taking medication to lower their CVD risk, and 25 k people with myocardial infarction survive each year

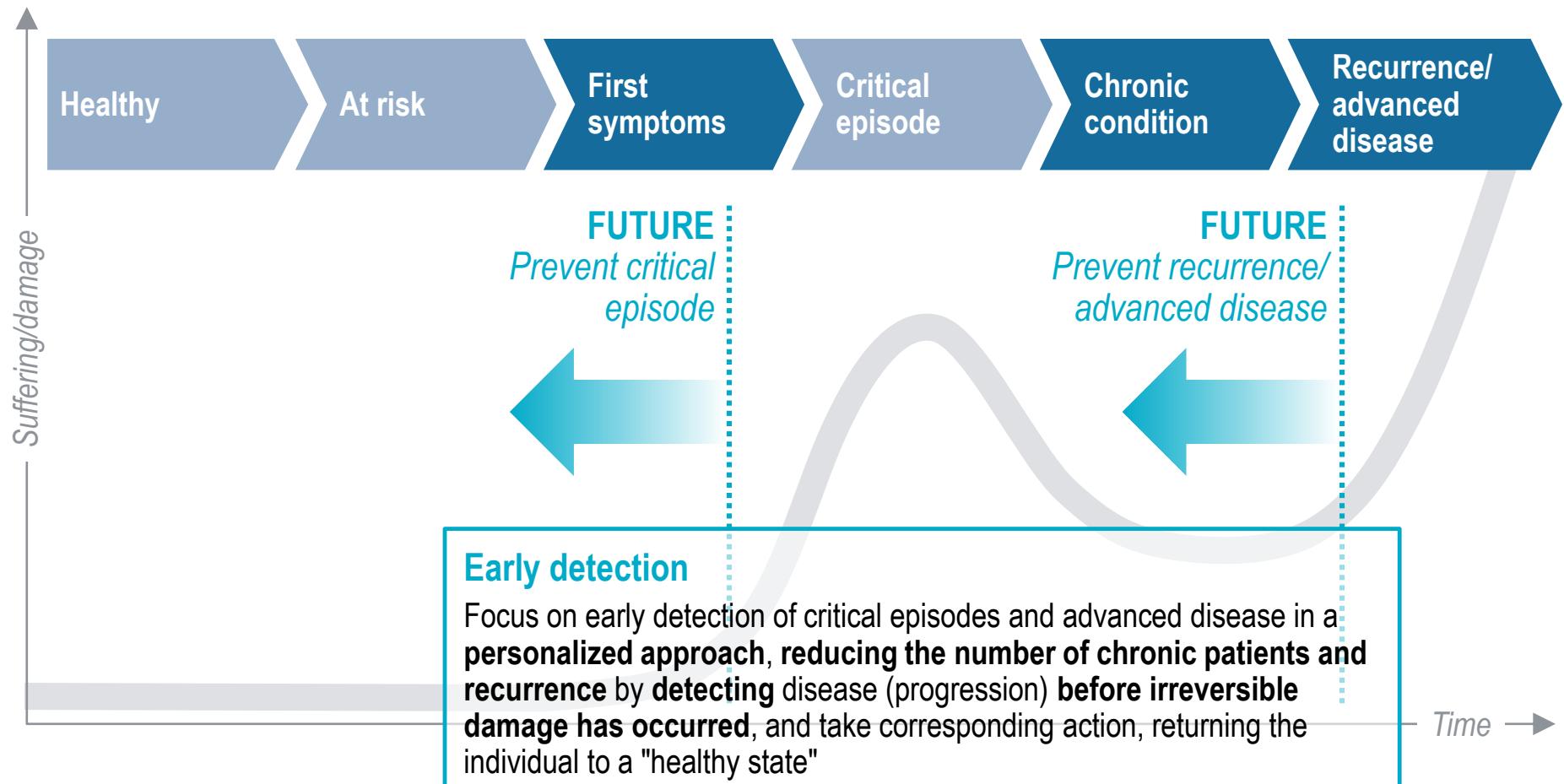
Medicalization, myocardial infarction and heart failure



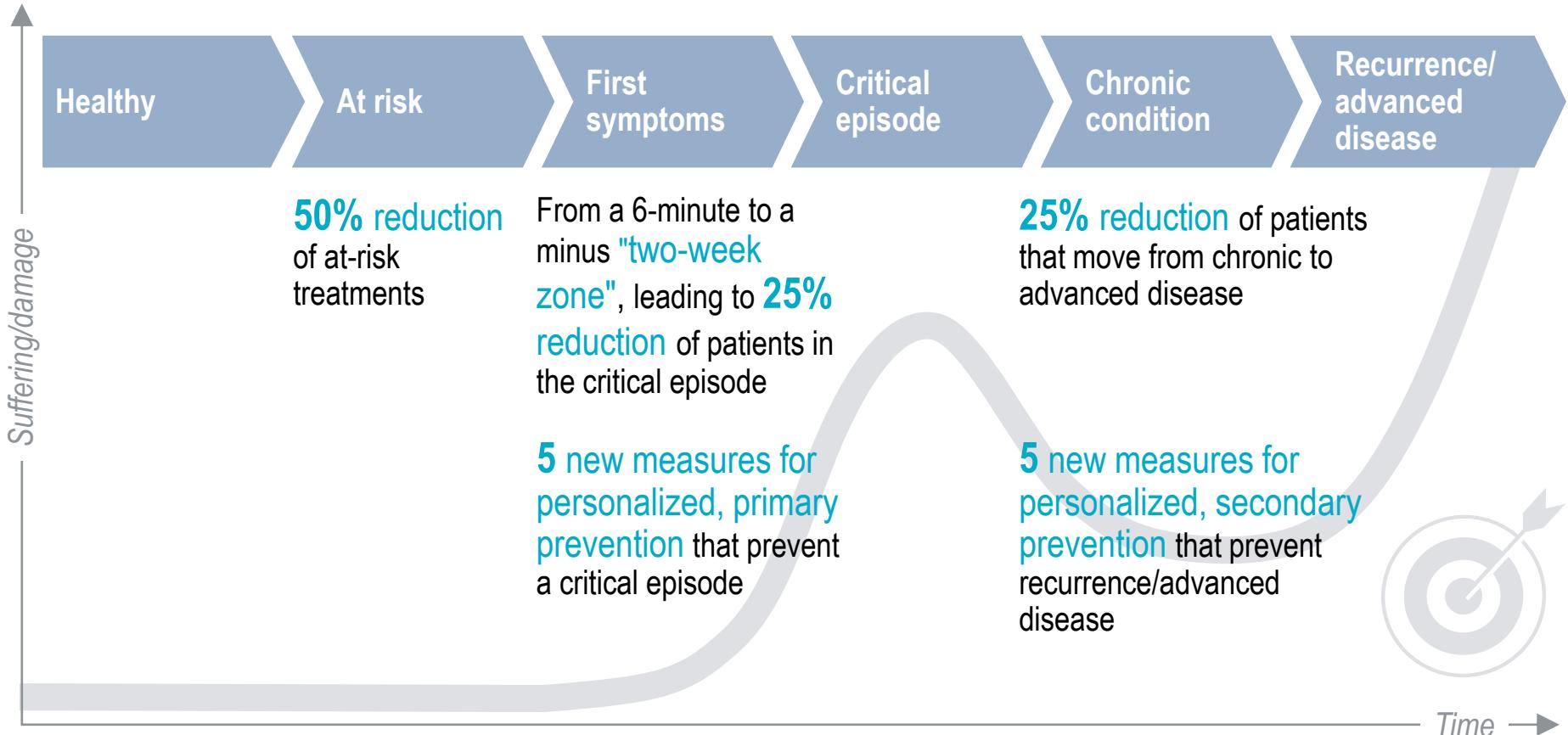
 Represents 10 k patients

Early detection can counter the growth of CVD prevalence and costs by taking action before real damage has occurred

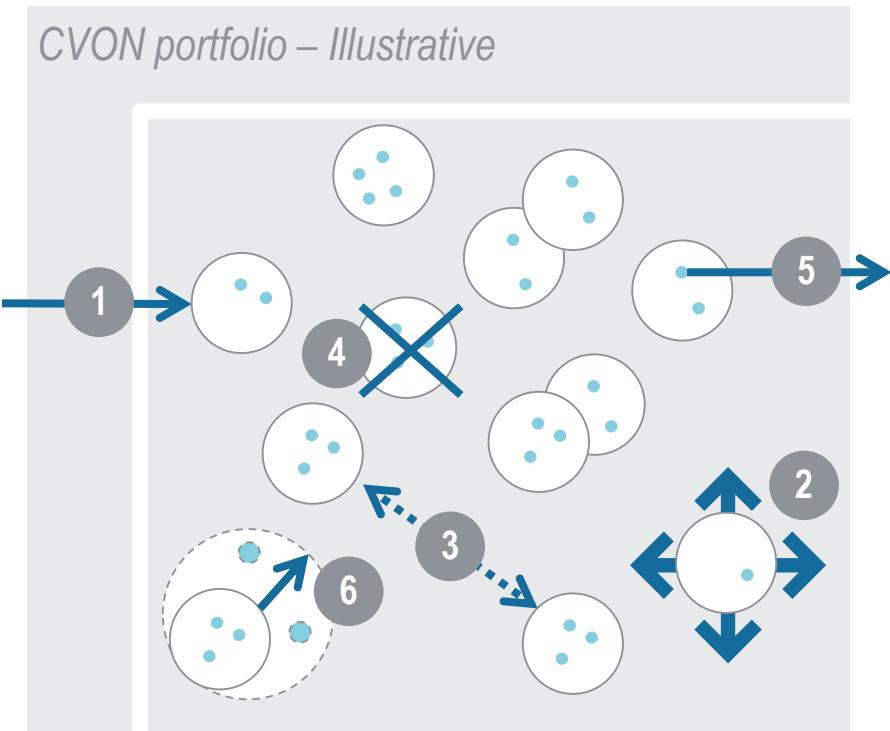
Early detection



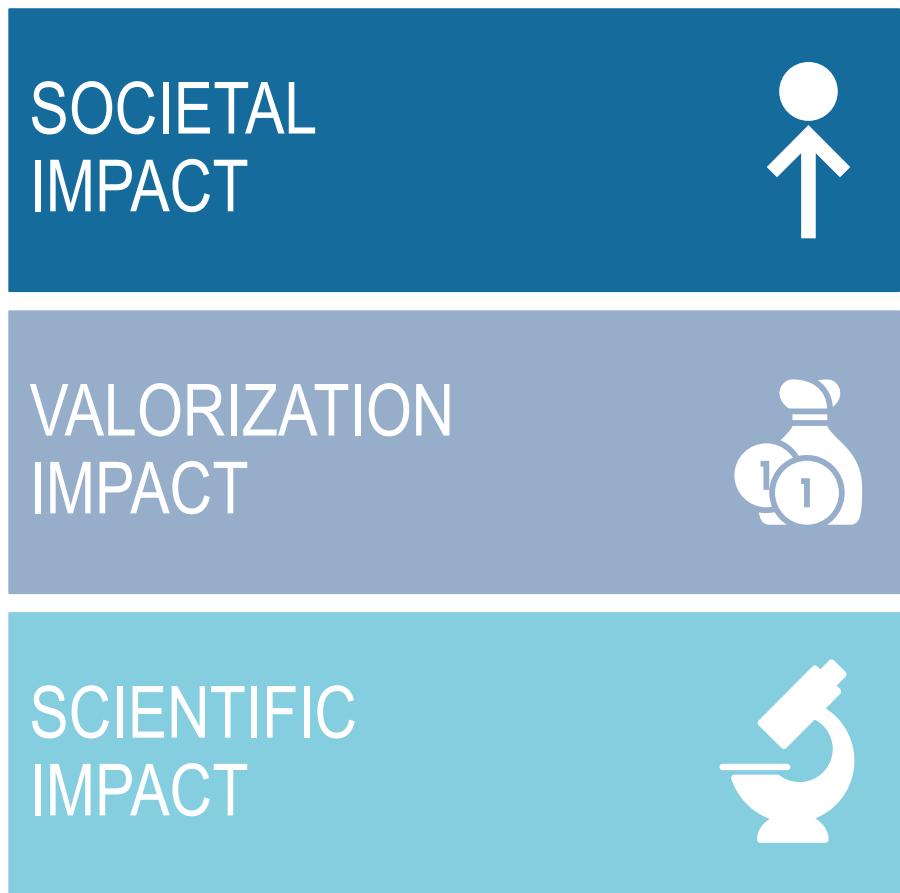
DCVA catalyzes the realization of priority solutions for CVD, saving and improving millions of lives



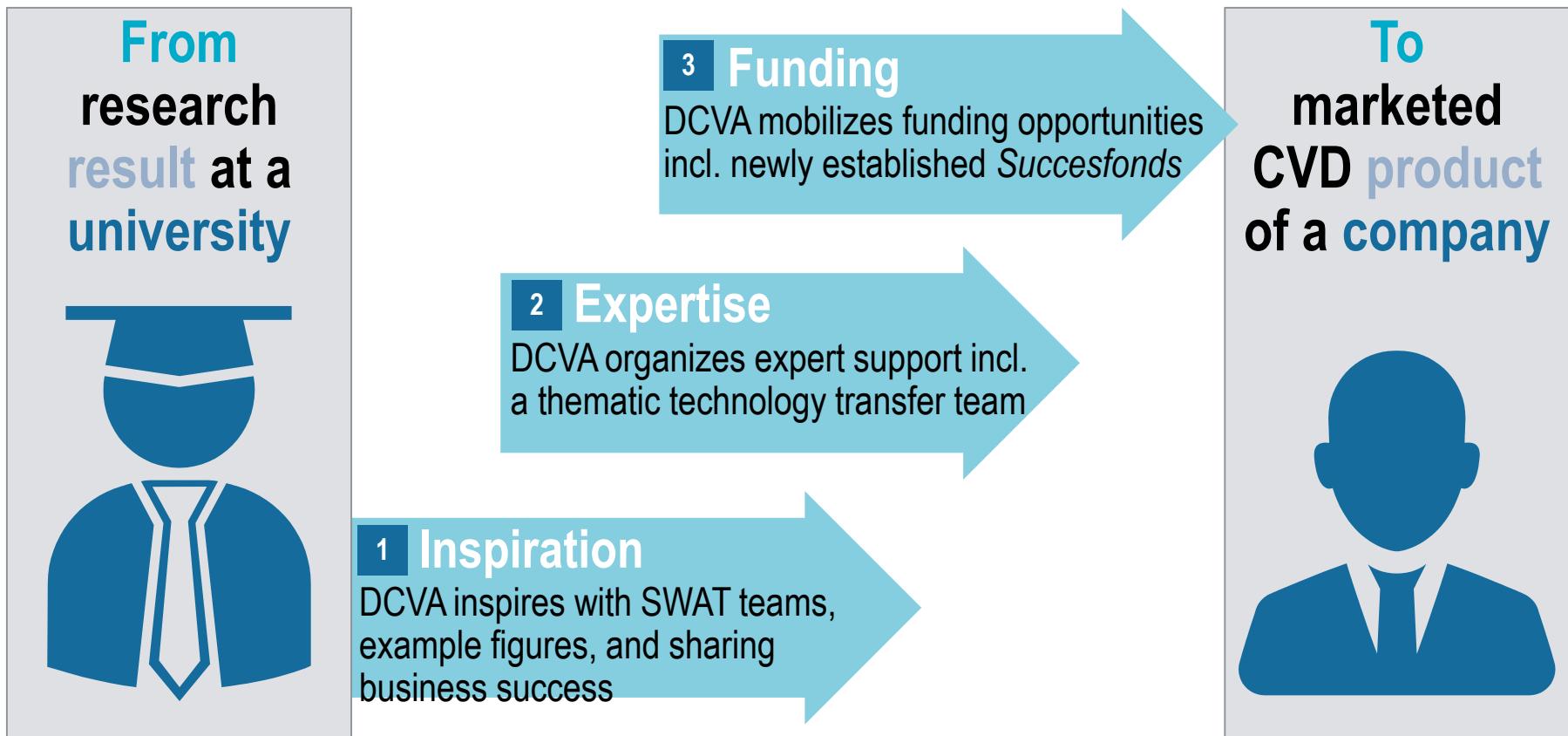
DCVA will mobilize investments in the research of the consortia and establish an active portfolio management that steers on impact



 Illustrates a CVON consortium with projects (blue dots)



DCVA will set up a valorization fast-track, bridging the gap from research results at universities to a marketed products of companies



Existing talent programs will be effectuated and additional programs designed

Strengthen existing programs

- 1 Rejuvenate **NL-HI/ICIN endowed chairs**, combine with **Dekker established grants** and scale to 10 DCVA professors
- 2 Pool **CVON talent budget** for post-doc projects and establish **post-doc mobility plan**, allowing talents to move between partners and consortia



Develop new programs

- 3 Create **sabbatical program** in annual CVD theme, attracting experts from abroad to work with Dutch talents
- 4 Provide **valorization education**, supporting entrepreneurial skills and opportunities for talents

- 5 Actively involve young talents in **critical decision making and leadership positions** in the DCVA

Three data infrastructure opportunities will be developed in close collaboration with the Health RI initiative

1 Community of data donors

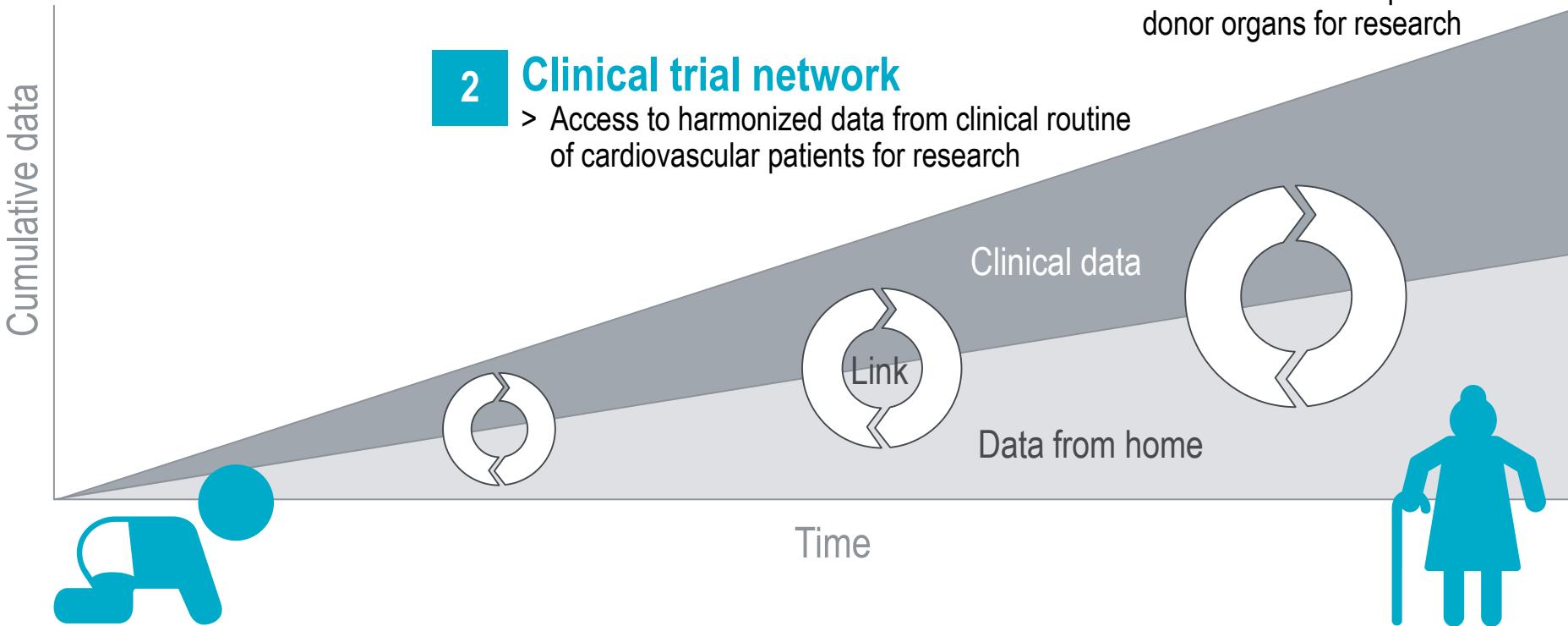
- > Access to data from people's daily lives for research
- > In return, donors get feedback about their health status

2 Clinical trial network

- > Access to harmonized data from clinical routine of cardiovascular patients for research

Netherlands Heart Bank

- > Cardiovascular samples from donor organs for research



Organization of the DCVA needs to get shape in the coming period

