



# Driven by health



Leids Universitair  
Medisch Centrum

STRATEGY  
2024 - 2028





# Driven by health

## Preface

We live in a world full of differences. Therefore, it was important for us to create a vision that goes beyond the walls of our University Medical Center when preparing a new strategy for LUMC. Innovation, connection and change are the core in our vision.

We give our new strategy 2024-2028 the title: *Driven by health.*

Together we work to improve healthcare and people's health. This is what drives us. Every single day. We evolve from delivering care to providing care for health. In this process, we will join forces to ensure that our initiatives come fully to fruition. Through groundbreaking research and innovative education, we deliver innovative care to our patients. In our work and collaboration with our partners, three core values guide us: personal, connecting and enquiring.

We strength ties within our region, and we also have collaborations within the Netherlands and internationally. In all our collaborative ventures, we aim to be a reliable partner. In a process where respect for each other's opinions, contributions and expertise are essential. Shared decision making is an important element of the healthcare we provide. The decisions are made together with the patient and their next of kin, as well as in collaboration with employees, students and our external partners. We believe in the power of connecting people, ideas and initiatives. Since only by working together we can truly push boundaries.

Every employee counts; whether they come from the Leiden region or a different continent, every individual brings their own knowledge and skills to the table. This diversity in background and ideas makes LUMC an appealing and powerful organisation. Together, we help improve healthcare and people's health. And for us improvement also means sustainable, safe, and high quality healthcare.

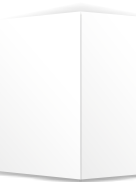
For centuries, LUMC has been closely linked to the University of Leiden. In 2025, our university will celebrate the 450th anniversary since its founding. Firmly anchored in the region and emerging from a colourful mix of centuries of traditions we always aim to stay one step ahead, supported by our intrinsic desire for innovation. As a university medical center, our goal is to solve complex, common and unusual medical problems: from serious vascular disorders to the treatment of rare forms of cancer, from serious heart defects in fetuses to palliative care. Our research ranges from studying the smallest structures of a cell to important factors that determine health in society.

In *Driven by health*, we describe our guiding principles for the next four years. This will be a living document focused on how we can constantly implement these principles in our daily tasks. We will implement this in a constructive manner on the basis of clear agreements in order to be both transparent and verifiable.

We embrace and bridge differences. We achieve strength through unity. Together we are one LUMC.

The Board of Directors

Douwe Biesma  
Martin Jan Schalij  
Frida van den Maagdenberg  
Henk-Jan Guchelaar



## Strategy 2024-2028

Together we work to improve healthcare and people's health. This is what drives us. Every single day. With *Driven by health* we jointly provide direction for a future ready LUMC.

- We strengthen our role as **innovator** by further integrating our core tasks research, education, care, and valorisation.
- The **connection** between our core tasks is essential for the innovations arising from LUMC. In the connection with our patients and based on our role in society, we aim to contribute to progression. Therefore we join forces in LUMC, in the Netherlands and internationally.
- Our profile is **recognisable** and aligns with our scientific and clinical expertise. Our key areas are aligned with the focus areas of the Leiden Bio Science Park and Leiden University. We choose the following three key areas, also known as our societal outreach-themes:

· Regenerative medicine

· Population health

· Data driven healthcare & artificial intelligence (AI)

# Ambition 2028

LUMC Leids Universitair Medisch Centrum



### Mission

**LUMC aims to be an innovator to improve healthcare and people's health.** That is our mission. And for us improvement also means sustainable, safe, and high quality.



### Four core tasks

Through groundbreaking **research** and innovative **education**, we deliver innovative **care** to our patients. And we focus on **valorisation** of scientific knowledge.



### Three core values

In our work and collaboration with our partners, three core values guide us: **personal**, **connecting** and **enquiring**.



# Driven by health

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# Our role as UMC

As an innovator, LUMC aims to improve healthcare and people's health. We constantly work towards this mission on the basis of our social responsibility as a public institution and in the interest of patients and society. We join forces within LUMC as well as with our partners, both regionally and (inter)nationally.

Through groundbreaking research and innovative education, we deliver innovative care to our patients. As well we promote preventative medicine. We embrace the principles of value-driven and data driven care and make full use of smart advanced technology.

The connection between our core tasks is essential for the innovations arising from LUMC. In the connection with our patients and based on our role in society, we aim to contribute to progression. Therefore we join forces in LUMC, in the Netherlands and internationally.

Our profile is recognisable and aligns with our scientific and clinical expertise. Our key areas are aligned with the focus areas of the Leiden Bio Science Park and Leiden University.

We choose the following three key areas, also known as our societal outreach-themes:

- Regenerative medicine
- Population health
- Data driven healthcare & artificial intelligence (AI)



Three core values



Personal

Four core tasks



Connecting

Enquiring

Mission

LUMC aims to be an innovator to improve healthcare and people's health.



Care  
Research  
Education  
Valorisation

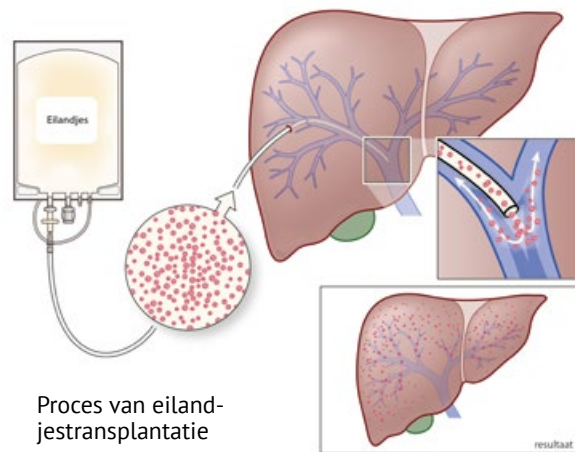
# LUMC as innovator

University medical centers are expected to innovate in academic care and contribute to solutions that make healthcare accessible, affordable and sustainable, now and in the future.

Our contribution to these issues is reflected in the following societal outreach themes: Regenerative medicine, Population health, Data driven healthcare & artificial intelligence (AI)

## Regenerative medicine

Regenerative medicine refers to innovative treatments aimed at function repair in damaged cells, tissues and organs. This is achieved by repairing, replacing or restoring cells, tissues and organ functions that have suffered damage. For example, in the form of therapy for chronic disorders such as diabetes, kidney disease and eye disease.



## Highlight

- In 2007, the first Islets of Langerhans transplantation in the Netherlands was performed at LUMC. Patients with a severe form of type 1 diabetes are eligible for this treatment. These islets enable the patient's body to, once again, produce its own insulin. Therefore the patient is no longer dependent on other treatments. We are the only centre in the Netherlands that performs this treatment.
- In recent years, research has been performed to improve our understanding of the heart and arrhythmia in order to identify novel treatments for damage in the heart. How can the heart be able to repair damage or an arrhythmia? For heart patients, gene therapy may make a contribution to improving their quality of life and prognosis.

## Population health

Population health refers to sustainable healthcare with a focus on improving people's health. For us, population health means studying the transition from health to illness in the population and conducting research into reducing the risk of illness. Using this process, interventions are then developed and tested with the aim to improve people's health.



## Highlight

- In 2016, together with the University of Leiden, we opened the Health Campus The Hague. The Health Campus operates according to three central principles: reducing discrepancies in health outcomes, applying a sustainable approach and having a broad health perspective. The Health Campus invests in collaborative ventures with partners within the region and beyond, with the aim of contributing to a healthy life expectancy for all.
- The Health Campus The Hague established a multi-domain data infrastructure for the Haaglanden and Hollands Midden region using their Extramural LUMC Academic Network (ELAN). Approximately two million people live in this region. In collaboration with Statistics Netherlands (CBS) it is possible to enrich socially relevant data with the addition of detailed care data from the social domain, first-line and second-line along with data obtained from the National Institute for Public Health and the Environment (RIVM). The aim of the ELAN data infrastructure is to conduct research into health-related issues.

## Highlight

- We are characterised by our appropriate and value driven care processes. This means that we make decisions in the care or treatment together with our patients. Recently, we have developed a unified approach, aimed at: assembling multidisciplinary care teams, enhancing the transparency of costs and (generic) outcomes, organising patient participation, reducing the burden on healthcare professionals, delivering care close to home wherever possible as well as evaluating and further developing all of our care paths.
- The aim of the regional SMART Triage project is to optimise ambulance triage using the assistance of innovative technology and specialist expertise. We aim to achieve this through further developing the successful HARTc. This could improve the assessment of the presence of an underlying cardiac condition in patients with chest pain. In order for doctors to be able to observe remotely and assess whether urgent transport to hospital is necessary, video and audio links have been created in ambulances.

## Data driven healthcare & AI

Data driven healthcare & AI refers to the digital transformation in our core tasks. At LUMC we believe that data driven working methods and AI can deliver a valuable contribution to appropriate and value-driven healthcare. For this reason, we are striving to implement various forms of AI: from prediction models for pathologists to image and speech recognition for the automation of repetitive tasks, as well as improving the transparency of complex management information.

# Our foundation

1575

## First university in the Netherlands

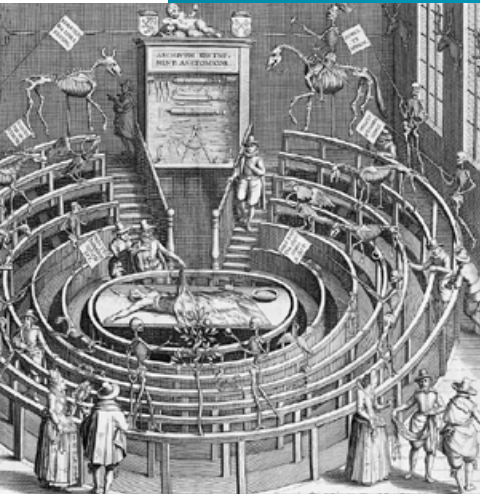
In 1575, William of Orange gifted Leiden a university. The university started with 3 faculties: Law, Theology and Medicine. The first professor of the Faculty of Medicine, Geraert de Bondt (Bontius), took part in the procession of the opening celebration. In recognition of the first professor of medicine, the LUMC Research Foundation is known as the 'Bontius Stichting'.



1636

## First academic hospital

The medical faculty housed not only medicine but also anatomy and botany. It housed an anatomical theatre and a *hortus botanicus* (botanical garden). In 1636, a number of beds were added at the Caeciliagasthuis (today the Museum Boerhaave) for teaching purposes, and thus the first academic hospital was born. There the internationally renowned Herman Boerhaave gave bedside lectures at the start of the 18th century.



1873

## The new Hospital

In 1873, the academic hospital opened its doors on the Steenstraat, today the location of the World Museum. As the demand for more laboratory space and more secure and comfortable conditions grew, plans were made for a new hospital on the Rijnsburgerweg. This facility was to be built in pavilions, as a means of preventing the spread of infections. World War One and financial shortages delayed the start of construction until the 1920's. All that remains today of this complex is the Poortgebouw building.



1915

## Foundation of Willem-Alexander Children's Hospital

In 1915, the Willem-Alexander Children's Hospital (WAKZ) was founded. In 2021, the WAKZ was completely renovated with state-of-the-art facilities for optimal childcare and parental support. The WAKZ is one of seven children's hospitals in the Netherlands. Besides providing general care for children, the WAKZ specialises in bone marrow transplants in children, neonatology and congenital heart defects, among others. The motto of the Willem-Alexander Children's Hospital is to care for sick children together. We put children first: 'the child is king'.



1924

## Willem Einthoven: Nobel Prize winner electrocardiogram

*Kind is Koning*



1965 - 2007

## Leiden becomes a specialist transplantation centre

**1965:** first bone marrow transplant in Europe  
**1966:** first kidney transplant in the Netherlands  
**1968:** first stem cell transplant in a baby in Europe  
**1984:** first pancreas transplant in the Netherlands  
**2007:** first Islet transplant in the Netherlands

1955/1962

## First heart surgery

In 1955, the first heart surgery in the Netherlands was carried out in Leiden, using the hypothermia method. Patients were operated on after being cooled to 29°C in a water bath. This procedure makes it possible to stop the blood circulation for a period of 8 to 10 minutes. The first internal pacemaker in the Netherlands was implanted in 1962.



1984

## Establishment of Leiden Bio Science Park

After World War Two, biomedical research became an increasingly important focus of the Leiden Faculty of Medicine. This led to the establishment of the study programme for Biomedical Sciences, followed by the foundation of the Leiden Bio Science Park in 1984, intended for both companies and knowledge institutions within the biotechnology sector.

1995

## Establishment of The Congenital Heart Disease Centre Amsterdam Leiden (CAHAL)

In 1995, the Congenital Heart Disease Centre Amsterdam, Leiden (CAHAL) was established. The expertise of three UMC's (LUMC, AMC and VUMC) are combined in this partnership providing an exceptionally high scientific output. It was the first centre in the Netherlands to focus care for children with congenital heart defects at LUMC location. As of 2023, CAHAL and UMC Utrecht are joining forces with the aim of further optimising this care.

1996

## Academic Hospital Leiden becomes LUMC

After years of collaboration between the university and the academic hospital, a clear structure was formed in 1996. The two institutions joined to form the Leiden University Medical Center (LUMC), with a focus on patient care, research and education. Two new buildings for research and education were included on 1 December 2006, making a long-held wish a reality: all core tasks housed in one place. The various buildings are linked together by walkways and tunnels, symbolising the relationship between the core tasks.

2020

## COVID-19 Vaccine in collaboration with Johnson & Johnson



2016

## Opening of Health Campus The Hague

In 2016, LUMC together with University of Leiden opened an academic workplace in The Hague. In collaboration with The Hague hospitals (HMC and the Haga Ziekenhuis), the University of Leiden and the Municipality of The Hague/municipal health care organisation GGD Haaglanden. *The aim is to contribute to a healthy life expectancy for all.*



# LUMC in numbers



**10.000**  
employees

Academic students

**3.400**

PhD-candidates

**1.700**

**860**

students in training to become a nurse (basic and further education)

+ medical professions

**3 bachelor programmes**

- Medicine

- Biomedical Sciences\*

- Clinical Technology\*

\*Top rated in Keuzegids 2024

**20** operating rooms

**5** cardiac catheterisation laboratory of which two hybrid

**3** intervention room radiology of which one hybrid

Education



**7 master programmes**

- Medicine • Biomedical Sciences • Technical Medicine
- Farmacie • Health, Ageing & Society • Population Health Management • Transfusion Medicine and Cellular and Tissue Therapies

Training for specialisations

**530**

Participants continuing education

**7.600**

Care



Hospital admissions: **25.000/115.000** (clinical/days)

First visits and repeat visits:

**432.000**

of which **35% digital**

Emergency care visits: **23.000**

Rating of our patients

**8.6**

**15.000**

Surgeries



Research



**3.000** scientific publications

**10 research themes**

The external research visit takes place at the end of 2024. The outcomes will set the course for further refocusing or restricting the research themes and the further integration of our academic healthcare profile and our research themes.

1. Academic Pharma
2. Cancer
3. Cardio-Vascular
4. Immunity
5. Infection
6. Lifecourse
7. Medical Genomics
8. Neuroscience
9. Prevention & Lifestyle
10. Regenerative medicine of tissues and organs

Our inventions

**36**

Licensed technologies

**11**

**2.685**

children born (in 2023)

**Our restaurant sells local products**  
Directly from the farmer



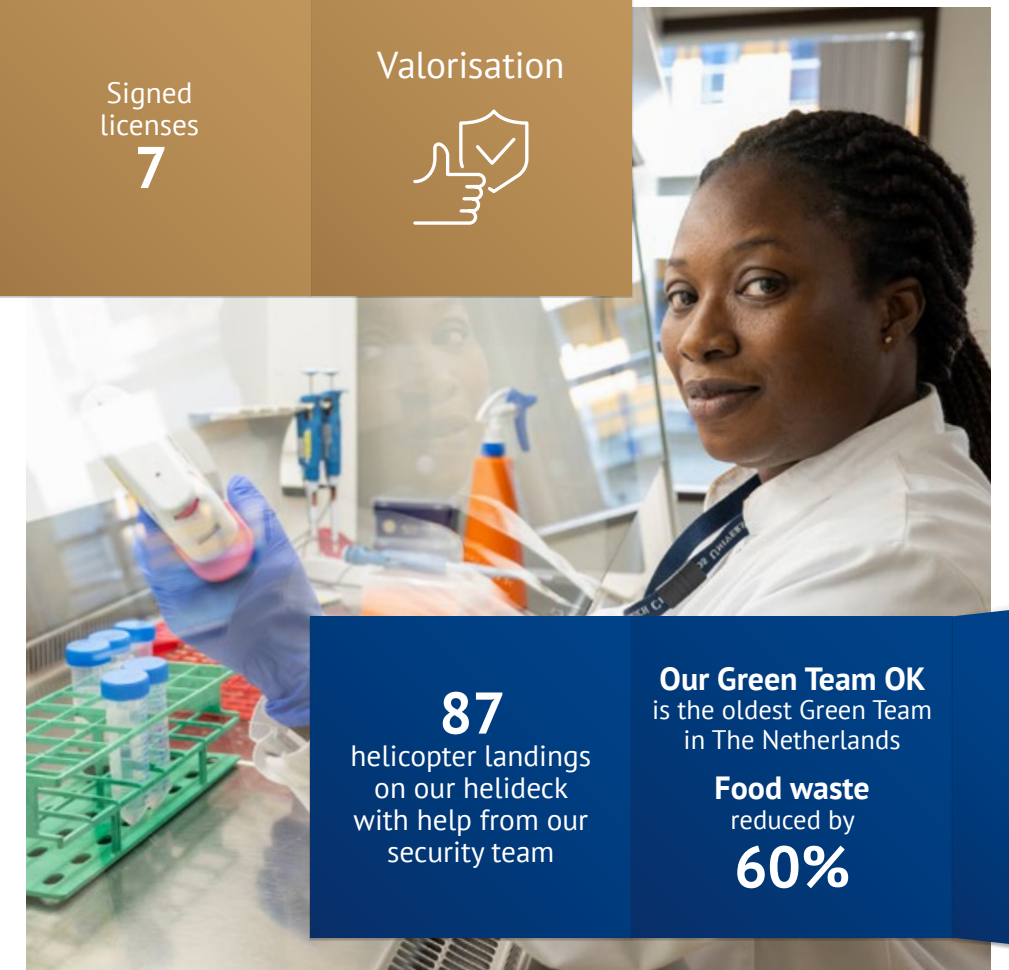
Research



**3.000** scientific publications

Signed licenses **7**

Valorisation



**87**

helicopter landings on our helideck with help from our security team

**Our Green Team OK** is the oldest Green Team in The Netherlands

**Food waste** reduced by **60%**





## Principles for managing

1. We are one LUMC; our common strategic interest comes first
2. We are transparent about our agreements and results, therefore we are also accountable for them
3. We encourage entrepreneurship and innovation

**1. One LUMC**

**2. Transparent**

**3. Entrepreneurship**

# Together we are LUMC!

Everyone is welcome at LUMC, because together we are one LUMC. A place where everyone feels safe, appreciated and at home. Regardless of their origin, religion or sexual orientation.

### Quality is work of man

Quality is who we are and what we do, together we deliver added value. We are interested in people. Every person counts. We ask our patients to express their wishes, preferences and expectations. We also ask our staff what is necessary to be able to effectively carry out their work today and in the future.

We connect different perspectives. We also link quality, accessibility of care and operational tasks. The quality of the care we deliver is appropriate, timely and accessible and in the right place. Our care is effective and efficient. Our research is increasingly focused on the questions our patients ask us.

Our approach is personal. We look for the person behind the patient. At the same time, we create a safe and inclusive culture for all employees.

*“Together we create value.”*



## Sustainability

*Sustainability is a principle in our care, research, education and operational tasks. We take responsibility for reducing our contribution to environmental pollution, biodiversity loss and climate change. We have committed to the Green Deal for Sustainable Care 3.0. In this manner, we set a clear example for current and future generations.*

*Over the coming years, we will be working hard to: reduce the CO<sub>2</sub> emissions of our buildings, increase the percentage of vegetable proteins in our food, increase awareness of planetary health among our employees and students, reduce the consumption of natural resources and reduce medication waste by 20%.*

# Collaboration through connection

## Our region in 2023

- 1,983,700 residents
- High population density
- Population numbers are expected to grow by 27%
- One-third of all residents has a foreign background



In the connection with our patients and based on our role in society, we aim to contribute to progression. Therefore we join forces with our partners in our region. And with our partners in the Netherlands and internationally. In addition to care, we also focus on scientific research, education and innovation. With this combination we fulfil the role as an innovation engine in our region.

The scope of our collaborations extend from hospitals within the region to international research consortia. Our regional partners, including our partners in first-line medical care, form our basis. In the Netherlands, collaboration with the *Samenwerkende Topklinische Ziekenhuizen (STZ)* and with other UMCs is essential to our work. Meanwhile on an international level, our partners consist of experts in the treatment of rare diseases, innovative education and leading research. Together with our partners, we constantly push boundaries to improve healthcare and people's health.



# OUR STRATEGIC GOALS FOR Future@Work

## Seizing opportunities

Everyone that works at LUMC contributes to improving healthcare and people's health. Our employees are the driving force and the beating heart of our organisation. They guarantee access to care to the growing number of patients in our region. Commitment, interest and loyalty of our employees are essential to our organisation. A pleasant working environment is indispensable in our challenging, academic environment. This requires a culture built around respect, transparency and accountability along with recognition and appreciation for the efforts of all our employees and students.



## We choose

### A working environment that is inclusive, safe and offers equal opportunities

We are constantly working to enhance diversity, equality and appreciation in LUMC. Together, we create an environment based on mutual trust where everyone feels secure and is able to perform. We develop standards for social interactions and encourage open dialogue. We hold each other accountable for our behaviour, which makes talking about our experiences in the workplace a normal use. We give special attention and create space for vulnerable groups such as students and staff at the start of their career.

### Talent development

Encouraging the talents of our employees and students makes our organisation futureproof. Therefore, we are expanding the training opportunities, creating career paths and broadening influence opportunities for every professional group within LUMC. In this way, we offer all our staff adequate prospects for their future. This process is already underway in the *Academia in Motion* programme, together with Leiden University. Overall, this combines the themes of *Recognition & Appreciation* and *Open Science*.

## Ambition 2028

- We provide a positive working environment
- We offer our talented employees opportunities to further develop themselves
- Our leaders foster connection

## Connecting leadership

Everyone plays a role in realising changes in the organisation. Our managers play an important role in introducing change and establishing collaborations. These tasks call for a form of connecting leadership. At the moment of filling key positions, the selection process will not only be based on knowledge and skills, but also on the candidate's talent to inspire and connect people. This requires character traits such as personal, connecting, enquiring, transparent and sincere.

## Appropriate organisation structure and culture

Reinforcing the connection with our core tasks and being a transparent and accountable organisation must be reflected in the structure of our organisation. Our organisation structure must help strengthen the connection between specialist departments and teams. This also involves appointing key officers for limited terms.

## In concrete terms

A pleasant, inclusive and safe working environment we create together. With behaviour from employees in key positions that serve as an example. We are constantly developing by learning from our successes and our failures. Another essential element is the confidence and space to have open conversations, on the basis of mutual respect and safety. By developing new ways of collaboration and organisation, we can create the conditions in which we can continue to respond to a changing environment, together with everyone in and around LUMC.



## Highlight

*LUMC relies on a committed and loyal workforce, and is anchored in the very heart of Leiden and the Randstad. Our location in the city is close to our university and the Leiden Bio Science Park. This location offers talented employees every opportunity for professional development both inside and outside the walls of LUMC.*





## OUR STRATEGIC GOALS FOR

# Together with our region, in the Netherlands and internationally

### Seizing opportunities

At LUMC, patients are guaranteed appropriate care for better health. Students come to us to receive advanced and inspiring education. Excellent research facilities are of fundamental importance to maintaining the attractiveness of LUMC for researchers. LUMC cannot achieve this alone, we rely on our collaborations with regional, national and international partners. For this reason, we are focused on strengthening collaboration between our employees in care, prevention and the social domain. Strengthening national and international collaboration within the research and education domains is one of our essential goals. This requires us to work together successfully beyond the boundaries of our own specialist fields.

### We choose

#### Focused collaboration

Over the coming years, we will continue to focus on strengthening the collaborations with our partners. Together with those partners, we are constantly looking for shared ambitions, with clear attention to complementing and supporting each other. We will continue to employ the model of our current collaborative ventures to future programmes.

### Ambition 2028

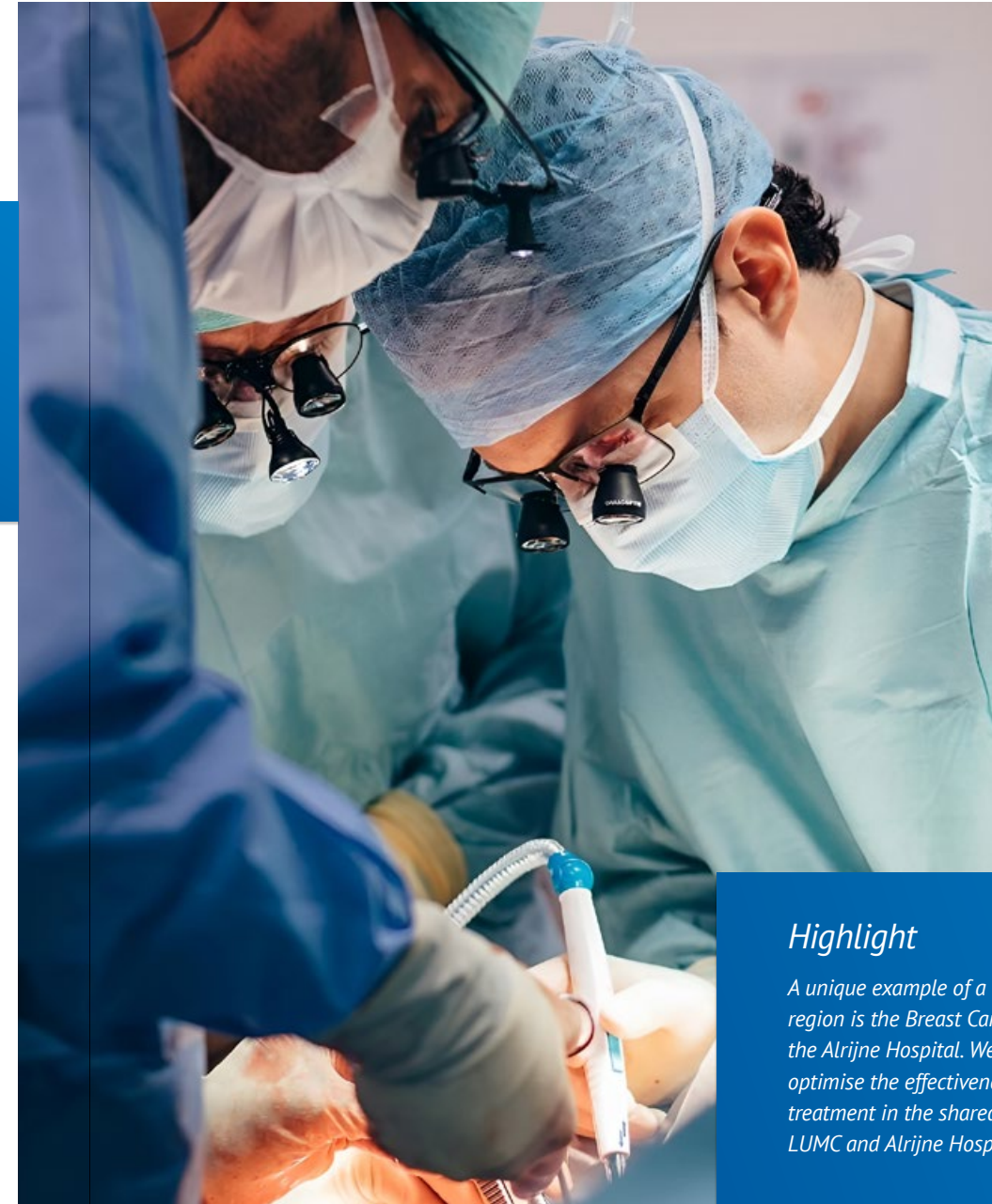
- We are perceived as a welcoming and reliable collaborative partner
- We are the innovation engine of our region
- We share our expertise with other centres

#### Focussed collaboration

Collaboration with our partners is organised in regards to patients with specific diseases. Care teams work together at different locations. Our regional partners form the basis, this includes practitioners from first-line care provision. Collaboration with top clinical hospitals and with the other UMC's is also important to us. Internationally, we have partners based on their rare disease expertise, innovative education and leading research.

#### Innovatiemotor van de regio

In the research consortiums, in which we structure our collaboration or with which we join forces, we gather knowledge that can be applied regionally, nationally and even internationally. This relates to knowledge that can be employed in healthcare but at the same time in the training of students, employees and researchers in our region. Together with our partners, we continuously strive to translate academic work into usable, practical innovations. The local collaboration with the Leiden Bio Science Park is also essential to our future, as it helps to enrich the education and training opportunities we can offer.



### In concrete terms

We maintain an external outlook, and go a step beyond the boundaries of our own specialist fields in order to offer space to our partners. We always adopt an open, welcoming and reliable position to fulfil our ambitions in the field of collaboration. We convey our goal to strengthen connections. Successful collaboration depends on personal contacts and following agreements. Our employees are our calling card in respect to our external partners. From an internal perspective, those same employees are ambassadors for achieving outward-focused collaboration.

*“We fulfil the role as the innovation engine of the region.”*

### Highlight

*A unique example of a collaboration in our region is the Breast Cancer Centre with the Alrijne Hospital. We work together to optimise the effectiveness of breast cancer treatment in the shared service area for LUMC and Alrijne Hospital. By working*

*together, we offer accessible care and improved service to an ever growing group of patients. By combining knowledge and expertise, as well as offering excellent care, the hospitals also focus on scientific research, training and innovation.*



### Ambition 2028

- We are the primary partner for first-in-human studies
- We jointly provide training and scout for talents
- Valorisation is a focal point in our policies



Foto: Michael van Vliet

### Highlight

Our shared facilities are a good example of collaboration with the LBSP. Our partners on the LBSP are given the opportunity to use our advanced research facilities.



LEIDEN  
BIO SCIENCE  
PARK

### OUR STRATEGIC GOALS FOR

# Together with Leiden Bio Science Park

#### Seizing opportunities

LUMC is part of the Netherlands largest ecosystem for life science & health: the Leiden Bio Science Park (LBSP). This cluster of high-quality education, research, care and business organisations attracts students, scientists and entrepreneurs from all corners of the globe. The LBSP is home to the highest concentration of bio science start-ups in the Netherlands and as such is an essential component of the Dutch knowledge economy. LUMC is proud to be part of this unique ecosystem and considers the collaboration with the LBSP to be highly valuable.

#### We choose

##### Connecting our research

Innovation in the field of life science & health is an important connection between LUMC and the LBSP. Over the coming years and when possible, we will be matching our research themes to the profile themes of the LBSP. We already recognise a natural connection with their profile themes: diagnostics and technological innovations for drug research, regenerative medicine and advanced gene therapies, prevention and life-style, vaccines and infectious diseases and AI and Data Science.

Currently, there are 14 shared facilities with the LBSP: Biobank Facility, Data Analytics Research Facility, Biosafety Level 3 Facility, Centre for Cell and Gene Therapy, Leiden Genome Technology Centre, Facility for Proteomics & Metabolics, Central Animal Facility, Light & Electron Microscopy Facility, Flow Cytometry Core Facility, iPSC Hotel, Peptide Facility, Protein Facility, Viral Vector Facility, Preclinical Imaging Facility. These facilities will help bring about innovation in the field of health and life science.

##### Joint training

We will be intensifying our existing networks by matching our Human Capital Agenda to that of the LBSP. The future demand for labour will be the guiding principle. In order to become familiar with the LBSP, our students will be given the opportunity to have internships at businesses located on the LBSP. We will also enable our researchers to collaborate with the LBSP by including these opportunities in their career paths. This will help students and employees to develop into entrepreneurial links with the organisations on the LBSP.

##### Supporting entrepreneurship

We will be expanding our focus on valorisation through the collaboration with the LBSP. We can accelerate the process from bench to bedside or bedside to bench by supporting our employees. Through a so-called 'incubator', they will be given access to both the LBSP and the knowledge and supervision of business practice available within LUMC. LUMC also plans to become a natural preferred partner for the licensing of patents and first-in-human studies for organisations on the LBSP.

#### In concrete terms

We strengthen our innovative capacity together with the LBSP. We will achieve this by conducting joint research and training our students and employees together. This will contribute to the development of our students and employees. By focusing on valorisation in our policy, we can therefore accelerate the route from research results to practical application in society.

# Together in care, research, and education

## Seizing opportunities

Being able to offer specialist care to patients with high-complexity diseases and the treatment for rare diseases are our strengths. Patients also attend LUMC for complex diagnoses. We have the necessary highly specialised knowledge, expertise and high-technology facilities on hand. For our last-resort function for complex diagnoses, we combine care and scientific research. We also serve as tertiary referral centre for patients from outside the region.

## We choose

### Focus on care and research with societal impact

Our care and part of our research is increasingly shifting to high complexity care for patients with rare diseases from our regional and supra regional collaborations. Not only are we broadening our knowledge and expertise in the treatment of the primary complications of high complexity care, our role goes further: we can contribute to the provision of good, accessible and appropriate care for patients with more common disorders. Over the coming years, we choose in favour of patient care and research, with a focus on regenerative medicine, population health, data driven healthcare & AI with the overarching aim of tackling the major issues facing society.

## Mutual connection between our academic healthcare profile and our research themes

To refocus our choices, we need a clear criterion, the criterion we have chosen is the mutual connection between our academic healthcare profile and our research themes. At the same time, we must still hold space for our fundamental research. Our current ten research teams will remain in place while we await the results of the external research visit in the autumn of 2024.

Any additional further focus will require the integration of care with existing research themes, wherever possible. Research groups which are less heavily involved in the academic care pathways, will be encouraged to establish more contacts with clinical care. This will help reinforce the awareness among our researchers into the clinical care portfolio and its related challenges. It will also encourage the researchers, in their academic role, to seek closer ties with specific questions coming from patient care. And Additionally, it works in both directions: clinical research is strengthened through intensive contact with the more fundamental research groups. We achieve this interaction, among others, by linking specific clinicians involved in the academic healthcare pathways to the leaders of fundamental research groups.

## In concrete terms

The external research review visit in 2024 will set the course for further refocusing or restricting the research themes. Depending on the outcome, the further integration of the patient care, research and teaching portfolio will be organised, taking into account the space corresponded to research, which is not directly linked to clinical care. And vice versa: how much space will be given to clinical care which is not linked directly to research.



Foto: Sander van den Bosch

## Ambition 2028

We have an integrated approach to our core tasks: research, education, care, and valorisation



## Highlight

A unique example of the collaboration between our core tasks is our successful stem cell therapy in babies with the life-threatening immune defect SCID. A gene therapy has been developed in order to provide adequate treatment to these patients. This therapy uses stem cells from the patients themselves. Additionally, patients from abroad can also submit their stem cells to LUMC for genetic repair. We then implement gene therapy and return the adapted stem cells to their original centre, where they can be administered to the patient intravenously. This means that the patient and the parents can remain in their own familiar environment during the months that the treatment process lasts.

# Together towards the education of the future

## Seizing opportunities

LUMC offers a unique portfolio of study programmes. With three university bachelor programmes, seven university master programmes, nursing and medical support programmes, specialist medical training, PhD programmes and in-service training, we can offer every opportunity for a lifetime of learning. Based on this broad portfolio, we prepare our students and staff for the health-related challenges of today and tomorrow.



## Ambition 2028

- We offer personalised training and development programmes to our students and employees
- We provide education in learning communities
- Data sciences and AI are integrated in our training and education programmes

## We choose

### Personalised training and development programmes

Our broad portfolio makes it possible to offer our students and employees personalised training and development programmes to match their personal needs. It also creates opportunities for learning and working that crosses boundaries of individual disciplines. Education is offered in the form of blended learning, with a combination of physical working methods and online learning activities. Wherever possible, we offer individual teaching methods and encourage investigative learning by providing space for creativity, individual choices and personal development. Academic education is central to all our teaching. Prepared with these competences and analytical skills, our students and staff are able to find solutions to the health and care challenges facing our society. They develop into team players, networkers, entrepreneurs and innovative thinkers.

### Strengthening our learning communities

We train our students and employees in learning communities together with our regional partners. These include other faculties from the University of Leiden, the Leiden University of Applied Sciences, nearby hospitals, general practitioners, mental healthcare organisations and home care and nursing facilities, the Municipal Health Service (GGD) and the regional partners in our Training and Education Organisation (OOR). At the national level, we harmonise our teaching with the professional associations. Collaboration takes place across the board, starting from the unique ecosystem of the Leiden Bio Science Park around the corner, to our international partners, who give us access to the international academic community. As a result, our students and employees are trained to become professionals who collaborate to bring forward better patient care and health.

## Highlight

*Our Biomedical Sciences Bachelor's programme has been labeled a top programme by the Keuzegids Universiteiten for the seventh time in a row. Specifically, this bachelor's programme scored the highest out of all biomedical sciences programmes in the Netherlands.*



## Technology in our teaching programmes

Data driven healthcare and AI will play an increasingly important role over the coming years in providing support to everyday tasks in care, research, education and operational practice. Therefore, this will require a different set of competences and skills. We are expanding the application of technology in our training programmes with the introduction of a "technical line". In this manner, we are integrating the application of new technologies within the courses we offer. Thus, our students and staff learn how to work *data-driven* and apply *AI* in their work or research.

## In concrete terms

The collaboration between our study programmes must be strengthened in order to fulfill the training of students and a future-proof development of employees. By learning together- especially outside the walls of LUMC - our students become health professionals prepared for future health challenges. When applying innovations in our education, we also conduct ongoing research into their effectiveness. In doing so, we use data and learning analytics. In this way, we ensure that students will benefit from the optimal implementation of teaching methods and we are able to continuously improve our education.

*"With the implementation of new technologies in our study programmes, our students en employees are able to apply this in their daily tasks"*



# Digitally connected



## Ambition 2028

- We continuously implement new digital healthcare concepts
- Our data platform serves as a healthcare data hub
- Our AI-expertise centre investigates, implements, and evaluates AI applications

### Seizing opportunities

New technologies are changing our everyday life and the way in which we provide care and promote health. We aim to further improve the processes and treatment of diseases by analysing data from healthcare and research. Because of digitalisation, focused specifically on developing innovative methods and technologies, we can contribute to tailored healthcare provision as a means of enhancing accessibility and delivering sustainable healthcare solutions.

### We choose

#### Standardisation through harmonisation

Using data to combine our four core tasks is an essential goal. Connecting and exchanging data is only possible if all that data is standardised. Over the coming years, we will be focusing on the necessary work agreements for achieving this goal.

#### Making data accessible, understandable and usable

We will make data accessible and exchangeable within LUMC, in the region and beyond. We aim to do so together with primary and secondary healthcare practitioners and the social domain. This will enable us to further develop appropriate and value driven care. We will make use of technology that allows us to improve population health, which we will then evaluate with scientific research. Internally, we will work in multidisciplinary care teams to improve health outcomes. Our goal is ambitious: by the end of 2025, we aim to make clinical care data findable, accessible, understandable and usable; for the right people and at the right time. We are also continuing with the *Academia in Motion* programme, in order to make scientific publications more accessible. Additionally we systematically make our datasets, codes and prediction models accessible via open access.

#### Developing a care data hub

We will further develop our data platform into a healthcare data hub. We will make our digital basic systems as interoperable, or connected, as possible, partly through standardisation. Data will become so easily exchangeable that it will enable us to improve patient care, research and education, as well as promote valorisation. As a connecting force in the region, we will make our healthcare data hub available to regional hospitals, therefore creating a regional healthcare data infrastructure. We will also work together to improve the care data infrastructure beyond the boundaries of our own region. Data interoperability calls for sensible agreements on data management and data use.

#### New digital care concepts

Through our (digital) innovations as well as our @Home applications such as apps, digital consultations and smart tools we are able to make care accessible, personal and affordable. We will also improve and enhance the sustainability of treatment methods by analysing data from healthcare and research. By subsequently sharing this data, together with our partners, we can make appropriate care available (as and where necessary) thereby reducing the burden on our employees.



### Highlight

*LUMC@Home is a unique example of a 'new technology' that has changed the way in which we provide care. In 2015 we started with The Box, a collection of different devices for home monitoring. The possibilities for monitoring at home have now expanded and, within LUMC, more applications for remote monitoring are now in use. This is an important element of futureproof, sustainable care, available in the right place. This makes it possible to safely monitor a patient remotely, thereby requiring fewer hospital visits. Telemonitoring also plays a supporting role in tackling the growing demand for care and the shortage of staff.*

#### Encouraging innovation by sharing results

We aim to expand visibility by sharing innovations and results both internally and externally in order to generate inspiration and ideas for new research and future innovations. In doing so, we focus on our own *societal outreach*-themes, research themes as well as the profiling themes of the Leiden Bio Science Park, the relevant sector plans of the central government and incentive programs of Leiden University.

#### LUMC as an AI centre of excellence

As part of Medical Delta and with the University of Leiden, LUMC is collaborating closely on AI. We are working alongside the University of Leiden to establish an AI centre of excellence for research, implementation and evaluation of AI. The Health campus in The Hague will also play an important role in this process. Within these collaborative ventures, we are working on the privacy aspects and practical applications, among others.

### In concrete terms

Fulfilling our ambitions in the field of data driven healthcare and life sciences requires the availability of relevant and interoperable data as well as far-reaching standardisation on the basis of standard work agreements. To make optimum use of (digital) technologies, professionals from different domains and disciplines will collaborate more closely. We will offer space to our employees to acquire the necessary (digital) skills and as a result we will develop the necessary tools for contributing to the digital transformation of our organisation.



# Acknowledgements

In drawing up our strategy for 2024-2028 *Driven by Health* many employees from all levels of our organisation took the time to share their ideas, knowledge, information and experience. The input from the six advisory teams and from over 300 employees during the open strategy sessions has been incredibly valuable. Also the input from the divisional boards, department heads, and the input from the more than 50 departmental and directorate visits has been of high value. Overall, we spoke to more than 500 employees. As the Board of Directors, we would like to thank all those involved for their commitment and thorough work. We shaped our strategy together and this shows how we join forces to create a future of improved healthcare and people's health. Because together we are one LUMC.





Driven  
by health

## Colophon

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