

Life sciences & health

Brabant holds a strong position in the Netherlands when it comes to the Life Sciences & Health industry. The presence of the full value chain in the field of Medtech and Pharma shows that Brabant has a mature and thriving LS&H industry.



1030 companies • **18,740** jobs • **4.8 billion** total export
• share LS&H NL **46.7%**

KEY FACTS



28.6%

growth of the
sector from 2015-2021

8.4%

total LS&H sector
in The Netherlands

4,8 billion
euros

The Brabant Production Value in
2021 in the sector.

JOBS

72.6%

of the Medtech
Manufacturing
Jobs and...

30.6%

of the Pharma
Manufacturing Jobs
are in Brabant

23,8%

18.740 jobs of the total LS&H
sector in The Netherlands

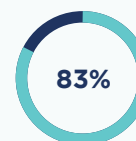
10.000

people working for Tier 1 and
Tier 2 high tech suppliers to
the LS&H manufacturing chain

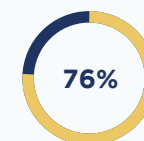
33.000

people who work in STZ-
Hospitals or specialized clinics

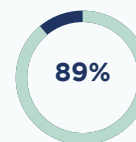
BRABANT PATENT SHARE IN THE NETHERLANDS



Imaging, Diagnostics
and Monitoring



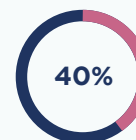
Wearable
Health Care



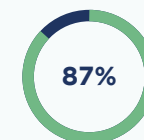
Immunology
Diagnostics



Medical
Technology



Biodegradable
Valves



Robotics in
Healthcare

Cluster size
Life Sciences
& Health

Source: LISA en CBS

Productive workforce

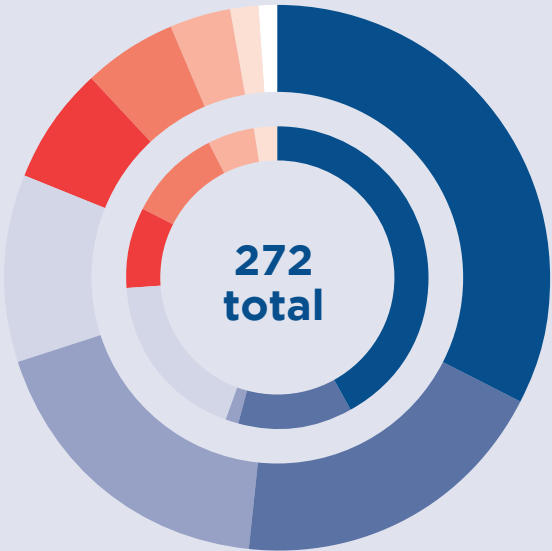
In total, Brabant has 272 life sciences companies with more than four employees.

This figure shows the types of companies the Brabant LSH sector comprises. Some findings:

- The largest share consists of wholesale of medical and dental goods, which are mostly small regional companies focused on dental, surgical or instrument engineering.
- The category ‘manufacture of basic pharmaceutical materials’ comprises the two locations of Aspen (Oss and Boxtel), plus Bionovion, a smaller firm at Pivot Park.
- MSD and MSD Animal Health are categorized in ‘manufacture of pharmaceutical goods’.
- The two companies in ‘R&D on biotechnology’ are Medtronic and ModiQuest Research B.V.
- Philips Healthcare is part of the category ‘manufacture of irradiation, electromedical and electrotherapeutic products’.
- Thermo Fisher is categorized in ‘other’.

Source: Achilles 2023 and LISA 2021

companies with more than 5 jobs activity



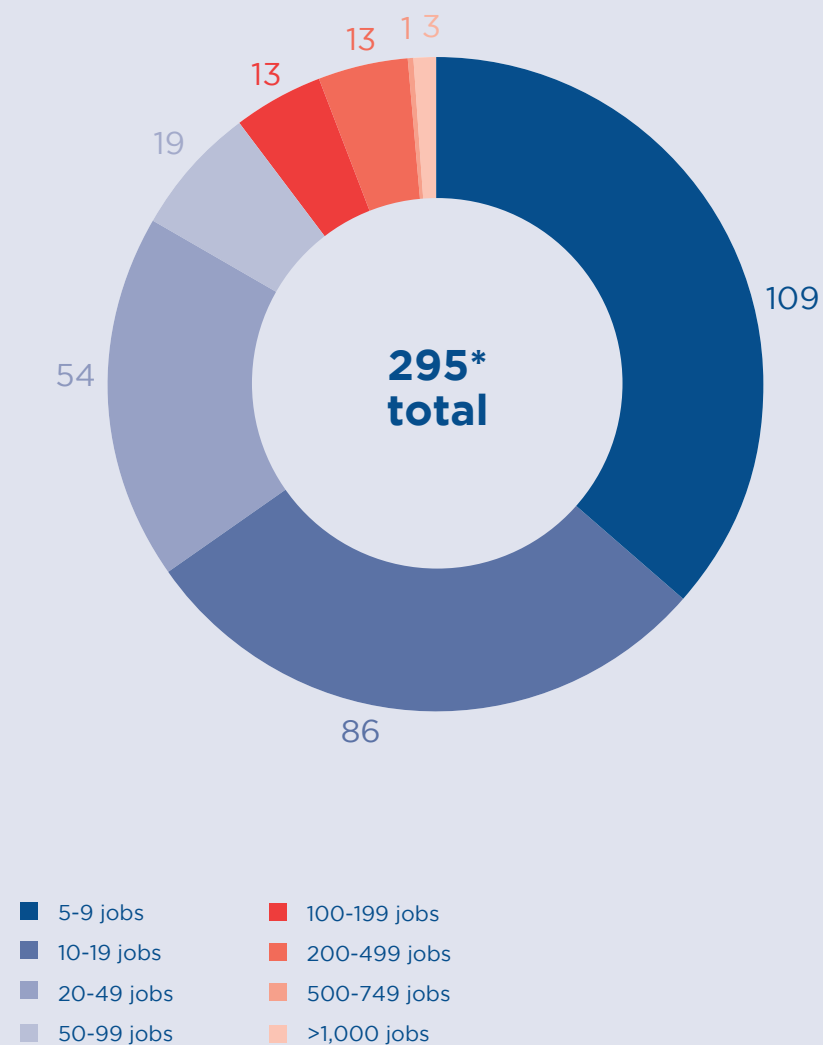
Branche	Number of companies	Foreign companies
Wholesale of medical and dental instruments	89	34
Manufacture of medical instruments and aids	52	10
Dental companies	50	1
Wholesale of pharmaceutical products	30	15
Health research and development services	19	7
Manufacture of pharmaceutical products	15	8
Biotechnology research and development (medical/pharmaceutical)	10	4
Manufacture of pharmaceutical raw materials	4	2
Manufacture of irradiation equipment, electro medical and electrotherapeutic products	3	-

As can be seen in the graph, the majority of the LSH (Life Sciences and Health) companies are small: 250 companies have fewer than 50 jobs, which accounts for 84% of all firms in the sector.

There are three companies with more than 1,000 jobs: Philips Healthcare, MSD Oss and MSD Animal Health. The company with between 500 and 749 jobs is Amgen. The next category (200-499 jobs) comprises eleven firms: Eurofins Central Laboratory, Thermo Fisher - Patheon Softgels, Merck Sharp & Dohme B.V., Vivisol Nederland B.V., Alliance Healthcare, Medtronic Trading NL B.V., Charles River Laboratories Den Bosch B.V., Biomet Global Supply Chain Center B.V., Janssen-Cilag B.V., VDL ETG Precision, Onemed | Bosman | Boeren Medical, Thermo Fisher Scientific.

* Companies with fewer than five jobs are excluded.
Source: Noord-Brabant 2021

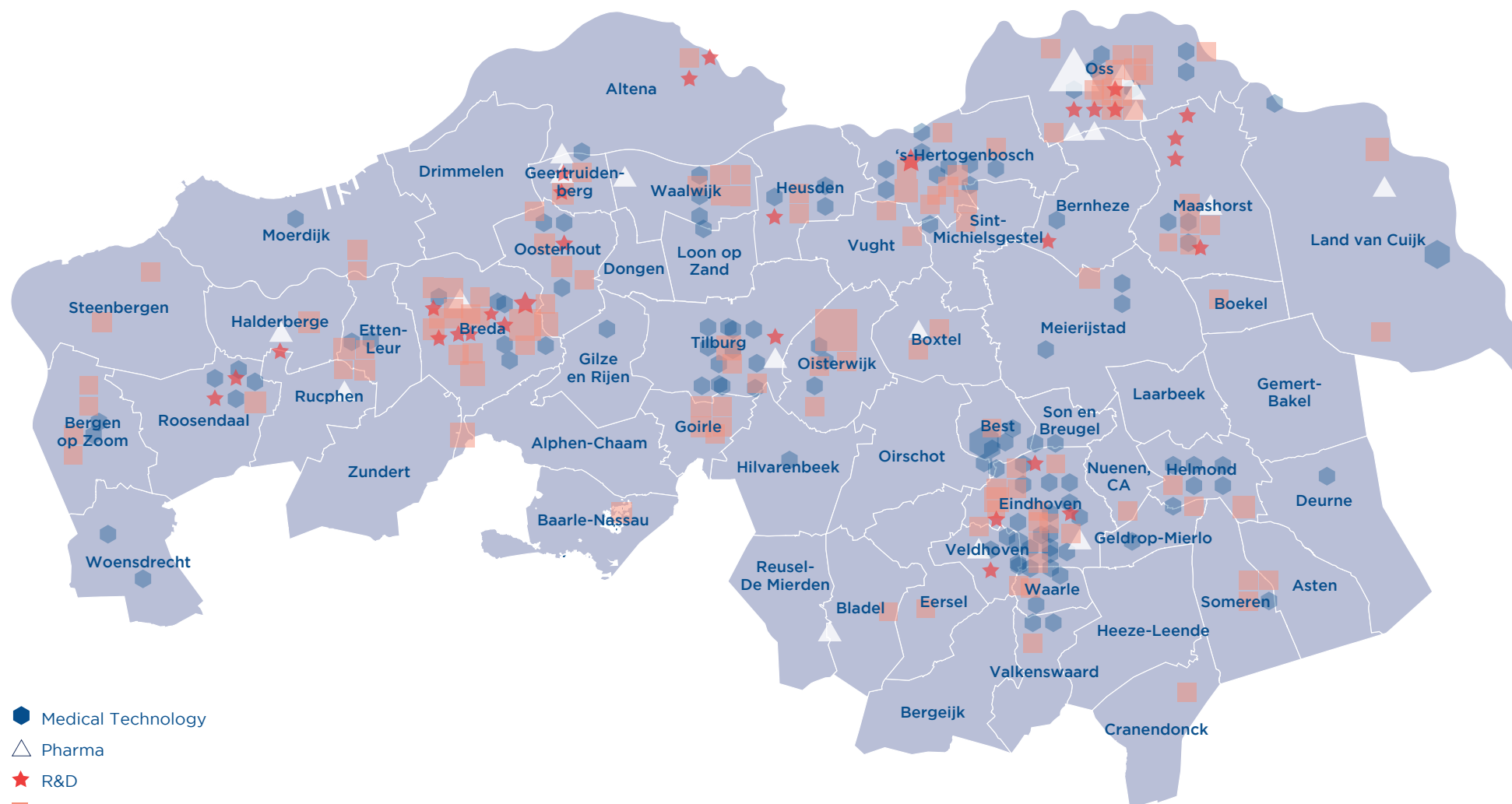
companies (size) activity



Selection of prominent Life Sciences companies in Brabant

Company	City	Activities	Country
Alliance Healthcare	Den Bosch / Veghel	Marketing & Sales / Distribution Center	Switzerland
Amgen Europe	Breda	Marketing & Sales /R&D/ SSC	USA
Aspen	Oss / Boxtel	Manufacturing/ R&D / Marketing & Sales	South Africa
B. Braun Medical B.V.	Oss	Marketing & Sales	Germany
Boeren Medical	Eindhoven	Marketing & Sales	Netherlands
Brocacef	Eindhoven / Boxtel	Distribution Center	Germany
Charles River Laboratories	Den Bosch / Schaijk	R&D	USA
Covetrus Animal Health	Cuijk	Headquarter / SSC	USA
Dechra Veterinary Products	Bladel	Headquarter Europe / Manufacturing / Marketing & Sales	UK
Eurofins Scientific	Breda / Oosterhout	Headquarter / R&D / Marketing & Sales	Netherlands
GE Healthcare	Eindhoven	Manufacturing / Distribution Center	USA
Illumina	Eindhoven	Distribution Center / SSC	USA
Janssen Cilag (Johnson & Johnson)	Breda	Marketing & Sales / R&D	USA
Medtronic trading	Eindhoven	Marketing & Sales / Service Center	USA
MSD	Oss	Marketing & Sales, R&D, Manufacturing, Distribution Center	USA
MSD Animal Health	Boxmeer	Headquarter - Europe, R&D, Manufacturing	USA
Össur	Eindhoven	Manufacturing	Iceland
Philips Health Care	Best	Manufacturing	Netherlands
Philips Research	Eindhoven	R&D	Netherlands
Thermo Fisher – Patheon softgels	Tilburg	Headquarter / Research & Development / Manufacturing	USA
Thermo Fisher Electron Microscopes (prev. FEI)	Eindhoven	Headquarter – Europe / R&D / Manufacturing	USA
Thermo Fisher Scientific	Breda	Marketing & Sales / Distribution Center	USA
Tjaopack	Etten-Leur	Headquarter Europe /	Netherlands
VDL ETG Precision	Eindhoven	Distribution Center	Netherlands
Zimmer Biomet	Breda	Distribution Center	USA

Spread of companies with more than 5 jobs in Life Science & Health, by subsector



Source: Vestigingenregister Noord-Brabant 2021, edited by BRO

Distribution

Brabant in general is very attractive for logistics companies, including distributors working in the life sciences sector. This is demonstrated by the many medical and pharmaceutical distribution companies present in Brabant, a sample of which is shown in the list on the right.



Medical logistics companies	Jobs	City
Abbott Logistics B.V.	50-99	Breda
Alloga	100-199	Veghel
American Dental Trading B.V.	50-99	Oisterwijk
Amgen Europe B.V.	500-799	Breda
Alliance Healthcare	200-499	Den Bosch / Veghel
Basiq Dental	50-99	Oisterwijk
B. Braun Medical	100-199	Oss
Boeren Medical	50-99	Eindhoven
Bosman Medische Hulpmiddelen B.V.	100-199	Eindhoven
Covetrus	100 - 199	Cuijk
EuroTec	50-99	Roosendaal
Healthlink	50-99	Den Bosch / Waalwijk
Hollister Services B.V.	50-99	Oud-Gastel
Janssen-Cilag B.V.	100-199	Breda
Pharmanovia Benelux	20-49	Breda
Medica Europe B.V.	100-199	Oss
Movianto	100-199	Oss
Össur Europe B.V.	100-199	Son en Breugel
PHC Europe BV	50-99	Etten-Leur
Philips Healthcare	> 1,000	Best
Sysmex Nederland B.V.	50-99	Etten-Leur
Tjoapack	100-199	Etten-Leur
Vivisol	200-499	Tilburg
Zimmer Biomet Global Supply Chain Center B.V.	100-199	Breda

Talent

Brabant has attracted top-notch researchers, entrepreneurs, and professionals in fields such as biotechnology, pharmaceuticals, and healthcare. Its world-class universities and research institutions provide a fertile ground for nurturing talent, while the region's commitment to sustainability and cutting-edge technologies ensures that the life sciences sector in Brabant continues to flourish.



Workforce: employment

18,740 people working in Life Sciences & Health in Brabant. From this group almost 43% has a higher education (UAS / University (BSc/MSc)), 38.6% has a medium education (HAVO/VWO/MBO) and 19% has lower education (primary school/VMBO).

This means that in Brabant 8,030 highly educated people are active in Life Sciences & Health.

Employees in life sciences & health by education level and region, 2021

Lifesciences	Total	Low	Middle	High
Breda region	4.160	1.000	1.730	1.420
Tilburg region	1.390	400	610	380
Den Bosch region	7.590	1.180	3.060	3.350
Eindhoven / Helmond region	5.610	900	1.820	2.880
Brabant	18.740	3.480	7.230	8.030

Lifesciences	Total	Low	Middle	High
Breda region	100,0%	24,0%	41,6%	34,1%
Tilburg region	100,3%	28,9%	44,0%	27,4%
Den Bosch region	100,1%	15,6%	40,3%	44,2%
Eindhoven / Helmond region	100,0%	16,0%	32,4%	51,3%
Brabant	100,0%	18,6%	38,6%	42,8%



Source: CBS, Vestigingenregister Noord-Brabant 2021

Graduates in Life Sciences & Health

Graduates form the largest group of new people entering the labor market.

Eindhoven University of Technology (TU/e) offers several programs in the Life Sciences & Health sector. In 2021 about 679 students followed the bachelor program Biomedical Technology. 920 students followed a master program of which 310 in Biomedical Engineering, 270 in Chemical Engineering, 150 in Medical Engineering and 160 in Human-Technology Interaction.

On a yearly basis around 550 student graduate from the Life Sciences & Health programs of the Avans UAS, Fontys UAS and HAS UAS.

At the vocational level about 330 students graduated in 2021 from a Life Science & Health related study. Most of them, 180, graduated in the Eindhoven / Helmond region. Moreover, 8,300 students follow a secondary education related to Life Sciences & Health. These students mostly continue their education at a higher level at a UAS or university.

* programs Nature & Health and Nature & Technology

Source: DUO

Students in bachelor and master programs, 2020

Students	Students 2022	Graduates 2021
Bachelor	1.040	240
Biomedical Technology	670	160
Chemical Technology	370	80
Master	920	190
Biomedical Engineering	310	90
Chemical Engineering	270	100
Human-technology Interaction	160	60
Medical Engineering	170	30
Total	1.960	420

Number of graduates programs Life Sciences & Health, universities of Applied Sciences

Graduates	2016	2017	2018	2019	2020
Avans UAS	180	220	240	230	260
Fontys UAS	240	220	210	230	260
HAS Green Academy	80	80	90	100	110
Total	500	520	540	560	630

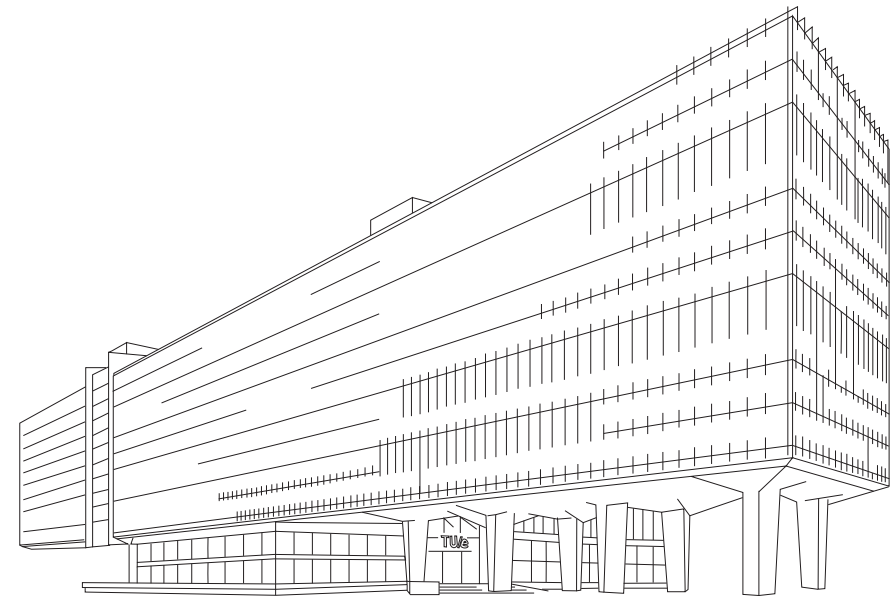
Graduates secondary education profile Life Sciences & Health and Nature*, 2021

Lifesciences	MBO	HAVO	VWO	Total
Breda region	60	890	1.040	1.990
Tilburg region	0	690	770	1.460
Den Bosch region	90	830	1.250	2.170
Eindhoven / Helmond region	180	1.260	1.570	3.010
Brabant	330	3.670	4.630	8.630

Technical University Eindhoven (TU/e)

The crucial facts and figures for the TU/e are:

- 11,000 students
- 5,000 knowledge workers
- 90 nationalities
- 14 distinct laboratories



Number of students in LS&H

	2014	2015	2016	2017	2018
Bachelor	550	630	710	740	670
Biomedical Technology	550	630	710	740	670
Master	410	490	580	660	740
Human-technology Interaction	70	80	100	120	120
Medical Engineering	60	60	70	80	110
Biomedical Engineering	130	170	190	220	260
Chemical Engineering	150	180	220	240	250
Total	960	1,120	1,290	1,400	1,410

Number of graduates in LS&H

	2013	2014	2015	2016	2017
Bachelor	70	80	100	130	150
Biomedical Technology	70	80	100	130	150
Master	160	150	150	160	190
Human-technology Interaction	20	20	30	20	40
Medical Engineering	10	20	20	20	10
Biomedical Engineering	60	40	50	50	60
Chemical Engineering	70	70	50	70	80
Total	230	230	250	290	340

Source: DUO, 2019



Source: DUO, 2019

Number of students in Industrial Design

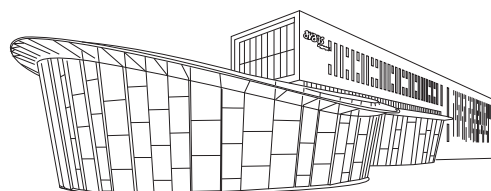
	2014	2015	2016	2017	2018
Bachelor					
Industrial Design	462	498	514	293	581
Master					
Industrial Design	139	150	156	79	176
Total	601	648	670	372	757

Number of graduates in Industrial Design

	2013	2014	2015	2016	2017
Bachelor					
Industrial Design	92	80	117	92	130
Master					
Industrial Design	59	45	58	61	61
Total	151	125	175	153	191

Universities of Applied Science Fontys, AVANS, HAS

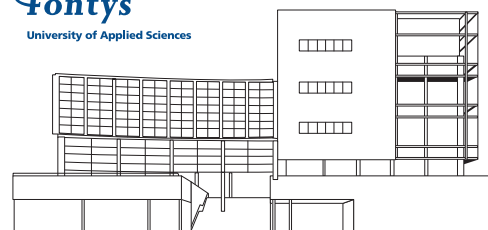
avans
university
of applied sciences



has
university
of applied sciences



Fontys
University of Applied Sciences



Source: DUO, 2019

University of applied sciences/courses

	2014	2015	2016	2017	2018
Avans UAS	770	780	860	940	930
Human and Technology	180	210	230	230	250
Biology and Medical Laboratory Research	590	570	630	710	680
Fontys UAS	1,000	990	970	950	1,070
Medical Imaging and Radiotherapeutic Techniques	570	580	580	570	700
Human and Technology	200	210	200	210	210
Podiatry training	230	200	190	170	160
HAS UAS	520	570	670	750	820
Applied Biology	520	570	670	750	820
Total	2,290	2,340	2,500	2,640	2,820

Graduates university of applied sciences

	2013	2014	2015	2016	2017
Avans UAS	120	110	100	130	130
Human and Technology	20	20	10	40	30
Biology and Medical Laboratory Research	100	90	90	90	100
Fontys UAS	200	200	250	240	220
Medical Imaging and Radiotherapeutic Techniques	90	100	120	110	100
Human and Technology	20	10	40	40	40
Podiatry training	50	60	50	40	30
Teacher Biology (second degree)	30	20	30	30	40
Teacher Biology	10	10	10	20	10
HAS UAS	80	60	80	90	110
Applied Biology	80	60	80	90	110
Total	390	380	430	460	460

Pivot Park

In General

Pivot Park is a life sciences campus, with a special focus on pharmaceutical innovation. The campus offers lab and office space of any size with access to high-quality pharmaceutical R&D facilities and infrastructure and expertise that gives companies the opportunity to accelerate, grow and excel in the area of drug discovery and development.

Among the 60 start-ups and scale-ups are also two GMP-qualified pilot plants (gram-to-kilogram and fill and finish) and an ultra-High Throughput Screening Centre for the acceleration of your drug discovery. On-site analytical support (a.o. NMR and LCMS) and a well-equipped Open Access Laboratory make investments in own equipment less of a challenge.

The Pivot Park ecosystem consists of an active and innovative pharma R&D Community, that acts as a hub within a broader international network. The campus is an incubator that connects knowledge and experience between established companies, start-ups and spin-outs. Pivot Park's business support with regards to access to grants, private investments and venture capital will provide start-ups with all the ingredients for kick-starting their company the best way possible.

Pivot Park is based in the heart of the city of Oss, the Netherlands, at one site with an open character. Oss is perfectly situated in the middle of the city triangle Eindhoven – Nijmegen – Den Bosch, and as a result companies in Oss benefit both from the universities, institutions and industrial companies there, but can profit from the highly qualified labor pool in the region as well. To facilitate that, Oss is perfectly accessible by car and public transport and from the different international airports in its surroundings. Life sciences culture is embedded at Pivot Park and in its community, which makes it the hotspot for pharmaceutical innovation.



pivotpark

The whole value chain from drug discovery, drug development, approval and registration through to manufacturing is present on Pivot Park

Pivot park has state-of-the-art core pharmaceutical R&D facilities, which are open for product developers, Contract Research Organizations and service providers. The core facilities consists of state-of-the-art biological and chemical laboratories and numerous modern chemical laboratories for synthesis and analysis with included services and utilities that are comprehensive. Moreover, Pivot Park provides start-ups with a 'starter package', ranging from glassware to laboratory equipment. And fully furnished and serviced offices, coffee corners, a meeting center and a restaurant.

Leading examples of CROs, CMOs and service providers at Pivot Park:

- BioConnection, active in the field of contract services and GMP manufacturing aimed at the development and production of sterile (bio) pharmaceutical drug products.
- Ardena has expertise in Active Pharmaceutical Ingredients and nanomedicines. For these innovative products, Ardena develops and validates the manufacturing process and the analytical methods, and performs the cGMP manufacture, quality control, and stability studies.
- Pivot Park Screening Centre, with its Open Access Lab for laboratory automation and High-Throughput Screening facility where drug discovery can be accelerated.

Source: LISA and www.pivotpark.com

Facts & Figures

Number of Jobs and companies (LISA and KVK)

	2016	2021	2022
Jobs	230	440	650
Companies	11	30	62
Growth		+ 172%	+ 107%
Foreign companies	2	9	*

Largest companies at Privot Park

#	Name	Jobs
1	Ardena	> 100
2	Bioconnection	60-100
3	Aspen	60-100
4	Aduro Biotech	40-60
5	Lead Pharma Medicine	20-40
6	Immunoprecise Antibodies	20-40
7	Zwiers Regulatory Consultancy	20-40
8	Acerta Pharma	0-20
9	InProcess instruments	0-20
10	PerkingElmer	0-20

Surface of Pivot Park

Gross	Net
7,5 hectare	7,5 hectare

Facilities

A growing list with accessible equipment through the Pivot Park Community and a well-equipped Open Access Laboratory make investments in own equipment less of a challenge. An overview of some of the available equipment:

- Agilent/Avantes UV-Vis spectrometer
- Biomek FX Lab Automation Workstation
- Bohle container mixer 5-10-20 L
- Bruker NIR MPA spectrometer
- Echo® 555 Liquid handler for high throughput screening
- EnVision Multilabel Plate Reader
- FACS Canto II, 3 lasers, 8 kleuren (4-2-2 configuratie)
- Flashforge Dreamer
- Flipr Tetra High-Throughput Cellular Screening System
- IncuCyte® Zoom Live-Cell Analysis System
- Malvern Sapphire NIR Imager
- MESO Quickplex SQ 120 (Meso Scale Diagnostics)
- Odyssey
- Operetta High-Content Imaging System
- PlateLoc Thermal Microplate Sealer
- Plateprep Island
- Proxima 2850
- Screening Island
- Tecan Infinite M1000
- Thorlabs Telesto II OCT
- XPeel
- X-Ray
- Zeiss Stereo Microscope

Trends and developments

Two new buildings will be added to Pivot Park during 2023. First, the all-new Panther building at Pivot Park is a five-floor building with a flexi-ble structure: the facade and floor plans can be adjusted as desired, creating an ideal building with laboratories, cleanrooms, offices and storage area. Second, the Grizzly Building serves as the hothouse for a myriad of pharmaceutical companies large and small. Approximately 30% of the space is set aside for offices and the remaining 70% for labs. Both labs and offices can be configured as desired and spaces can be combined, closed off and leased separately. Grizzly is ideally situated at life sciences campus Pivot Park in Oss, the Netherlands.

Great ideas don't automatically translate into a great business. It takes time, attention and the right environment. Pivot Park offers all the necessary support, and with our planned incubator building, we're creating a go-to location for early phase start-ups.

Pivot Park was conceived as a breeding ground for biopharmaceutical start-ups. A place where the brightest researchers working in result-driven drug discovery and development find support. And where entrepreneurial enterprises grow into self-sustaining start-ups, either moving to a bigger space within the campus or outside when the time is right so that others can benefit in the future. Our incubator programme combines focused facilities – the facilities start-ups need – with a lively and inspiring environment and easy access to knowledge institutions at Pivot Park.

When finished, the Pivot Park incubator building, at the moment called Racoon, will bundle their current incubator offering in a state-of-the-art laboratory and office space. Incubator-inspired features will include shared accommodation so innovators can connect and exchange ideas, and an open access equipment facility. Reuse is a central theme and involves redeveloping an existing building to create what, in effect, will be an all-new one. Regarding sustainability, the aim is to meet the EU requirements for Nearly Zero-Energy Buildings.

High Tech Campus Eindhoven

High Tech Campus Eindhoven is the smartest km² in Europe with more than 300 companies and institutes, and 12,000 researchers, developers and entrepreneurs working on developing future technologies and products. The professionals on campus come from all over the world: more than 85 nationalities are accounted for. The Campus helps companies to accelerate their innovation by offering easy access to high tech facilities and international networks.



LS&H Companies and Institutions at High Tech Campus Eindhoven

Company	Type	Activities
Biotech Systems Platform	Institute	The Biotech Systems Platform (BSP) promotes innovation and cooperation between companies and knowledge institutions active in biotech. and High-tech.
Holst Centre	Institute	The Holst Centre is an independent open-innovation R&D centre that develops generic technologies for wireless autonomous sensors and flexible electronics.
ITRI	Institute	The Industrial Technology Research Institute (ITRI) is a non-profit RTO dedicated to spearheading emerging high tech industry and enhancing the competitiveness of existing industries.
AKKA	Technologies	SME International engineering consultancy.
Intrinsic ID	SME	World's leading digital authentication company and the inventor of SRAM Physical Unclonable Function or SRAM PUF.
Timpel	SME	Timpel is a leading provider of electrical impedance tomography, covering the needs of all HCPs involved in ventilation and respiratory care.
AMS	Multinational	AMS' products are aimed at applications that require extreme precision, accuracy, dynamic range, sensitivity and ultra-low power consumption. AMS' product range includes sensors, sensor interfaces, power management ICs and wireless ICs for buyers in the consumer, industrial, medical, mobile communications and automotive markets.
Cetas Healthcare	Multinational	A global firm specialising in customer insights and strategy for the medical devices industry.
FAULHABER	Multinational	FAULHABER offers the most extensive range of miniature and micro-drive systems currently available worldwide.

Source: High Tech Campus Eindhoven

HIGH TECH CAMPUS EINDHOVEN

Company	Type	Activities
Hudl	Start-up	Hudl is an innovative startup focusing on automatic image improvement and analysis using cutting-edge camera technology and algorithms.
KeyTec	Multinational	KeyTec offers various metal stamping/bending/deep-drawing technologies and plastic/2K/insert injection moulding, including various painting, printing and (sub)assembly techniques, all under one roof.
ON Semiconductors	Multinational	ON Semiconductor (Nasdaq: ON) is a driver of energy efficient innovations, empowering design engineers to reduce global energy consumption.
Philips	Multinational	Royal Philips N.V. is a leading provider of health technology that focuses on improving people's health and achieving better healthcare outcomes throughout the health continuum, from healthy living and prevention to diagnostics, treatment and home care.
Siemens	Multinational	High tech industries.
Teledyne DALSA	Multinational	Teledyne DALSA, a wholly-owned subsidiary of Teledyne Technologies since 2011, is an international leader in high-performance digital imaging and semiconductors.
Care IQ	Service company	Care IQ is a healthcare consultancy that works with care providers, health insurers and medtech companies to create innovative smart care concepts for patients and their families.
Gilde Healthcare	Service company	Gilde Healthcare is a transatlantic investor in fast- growing healthcare technology and healthcare services companies.
MD Squared	Service company	In a changing regulatory and commercial environment, MD Squared is clearly focused on driving value creation through a unique combination of marketing expertise, medical competence and regulatory support for medical devices.
TEN Flecs	Service company	TEN Flecs is a contract manufacturing facility for thin-film integrated circuits and backplanes based on IGZO and organic TFT technologies.
AirBliss+	Startup/Scaleup	Health tech hardware startup developing an anti-pollution mask for prolonged and daily usage.
Bloomlife	Startup/Scaleup	Bloomlife's mission is to empower women by delivering unprecedented insight into their health. With its smartphone-connected sensor and app, Bloomlife puts clinically validated information into the hands of expecting parents, starting with an improved method for visualising and tracking.
byFlow	Startup/Scaleup	byFlow is a company founded in 2009 that specialises in 3D printing and is an expert in the field of 3D food printing.
Chromodynamics	Startup/Scaleup	High-speed, real-time multispectral imaging systems for medical and industrial applications.
Emultech	Startup/Scaleup	Emultech is a high tech company that helps pharmaceutical companies with more efficient drug delivery in order to contribute to a better quality of life.
GTX Medical	Startup/Scaleup	GTX Medical is developing a therapy using a spinal cord implant to deliver task-specific electrical stimulation during training.

Source: High Tech Campus Eindhoven

Company	Type	Activities
LifeSense Group	Startup/Scaleup	Wearable healthcare technology, including for urinary incontinence
Minicare	Startup/Scaleup	Next-generation point-of-care diagnostics. Minicare BV is an innovative company that is active in the emerging field of point-of-care diagnostics.
Montes Jura Medical Technologies	Startup/Scaleup	Montes Jura develops and produces devices that are used in interventional radiology, with the focus on stents to keep the bile duct open, microspheres loaded with cytostatics for the treatment of liver tumours and detachable coils to repair aneurysms
Nikinc Group	Startup/Scaleup	The Nikinc Group strives to make a positive difference as an innovative company, primarily through the development of ingenious, practical and affordable medical and dental products.
Pharmi	Startup/Scaleup	Adequately educating patients on a new drug prescription is one of the most important aspects that predicts adherence and adequate drug use and thus improves patient results.
Plasmacure	Startup/Scaleup	Medtech startup Plasmacure is dedicated to helping people who suffer from chronic wounds, and will market an innovative treatment method to heal such wounds.
Reset Yourself	Startup/Scaleup	Reset Yourself helps people crack their secret code to a healthy lifestyle using the Reset Hair Analysis.
Salvia BioElectronics	Startup/Scaleup	Salvia develops electrical stimulation instruments. The company's mission is to deliver bioelectronic solutions that restore health for people suffering from chronic migraines.
Sirius Medical Systems	Startup/Scaleup	Sirius develops affordable solutions that enable the precise and efficient surgical removal of early-stage tumours.
Sparckel	Startup/Scaleup	Sparckel is a young, innovative organisation that successfully conceived and developed and now produces and markets the world's first free-standing biodynamic LED lighting concept.
Usono	Startup/Scaleup	Usono facilitates medical staff in their work to provide better care using smart ultrasound solutions.
UVisio	Startup/Scaleup	UVisio develops comprehensive solutions allowing individuals to control their physical exposure to external factors, such as UV rays, and personalise their entire sun-care and skin-care experience.

Source: High Tech Campus Eindhoven

Institute name	Activities
Philips Innovation Labs: Electromagnetic Compatibility & Wireless Connectivity lab	Far-reaching and accurate testing, consultancy and certification in the fields of: • Electromagnetic Compatibility (EMC) • Wireless approbation • Wireless robustness (multipath performance, total radiated power, antenna diagrams) • Electrical Safety
Philips Innovation Services	• Laser job prototyping services • Product prototyping • Instrumentation services • Technical support and technology consultants
Eurofins: Material Analysis lab	The Material Analysis lab was purchased by Eurofins EAG in December 2018 and was formerly the Materials Analysis lab for Royal Philips and Philips Lighting (now Signify). Services: The Eurofins facility in Eindhoven specialises in the materials analysis and reliability testing of high tech materials and products. It also has specific expertise in the areas of: • Chemical analysis and physical inspection of materials and objects • Analytical methodology • Contamination control • Chemical compatibility • Material reliability • Glass characterization Analytical techniques • Compositional analysis GF-AAS, CV-AAS, ICP-OES, (LA-)ICP-MS, Elemental Analysis, FT-IR, Raman, GC-MS, HPLC, IC-MS, MALDI, NTM, XRF, Gravimetry, , Titrimetry, Thermal Desorption • Surface and thin film characterization Ellipsometry, SAM, ToF-SIMS, XPS • Advanced imaging FIB, Image processing and analysis, SEM-EDX, TEM, IR imaging, Optical interferometry, Profilometry, SPM / AFM, Thermal imaging / Thermography, X-Ray inspection

Source: High Tech Campus Eindhoven

Institute name	Activities
	Physical characterization Materialography, mechanical testing, particle size analysis, permeability, physical properties of glass, rheology, sample preparation laboratory, specific area of powders, strain analysis, thermal analysis, thermo-mechanical analysis, XRD, electrochemical testing
Eurofins: Reliability lab	The EAG facility in Eindhoven was purchased by Eurofins EAG in December 2018 and was formerly the Reliability Lab for Royal Philips and Philips Innovation Services. The Reliability Lab offers a complete package in reliability testing services: Environmental simulation: - High/Low temperature - Temperature and humidity - Power temperature cycling (PTC) - Thermal cycling - Thermal shock - HAST/corrosion testing - Solar/UV simulation In-Situ test service: - LED lifetime (optical output) - Event detection (low resistance) - Monitor (I/V/L/R vs. time) Highly accelerated lifetime test (HALT): - HALT test - MEOST test Mechanical test service: - Bump and shock - Drop test and free fall (mechanical and simulation) - Surface affection - Waterproof pressure test - Drawbench and tensile test Water Vapour Transmission Test (WVTR): - Calcium test on thin-film barriers

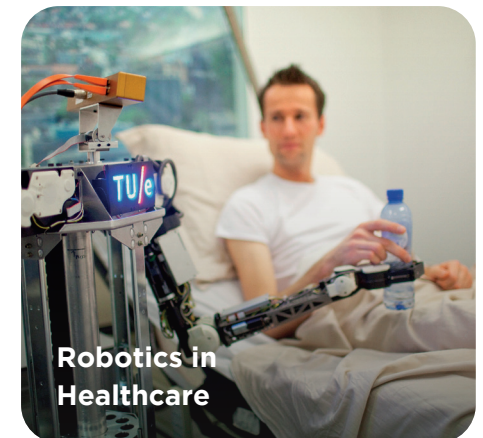
Source: High Tech Campus Eindhoven

Opportunities in Life Sciences & Health

Brabant excels in life sciences and health due to its robust innovation culture and collaborative research environment. The region is strong in specialized niches, notably immunology, drug discovery and development, regenerative medicine, animal health, imaging, and robotics in healthcare. This success is driven by pioneering breakthroughs in

understanding the immune system, creating innovative therapies, advancing regenerative techniques, enhancing animal well-being, and integrating cutting-edge technology into healthcare practices. Brabant's commitment to pushing the boundaries of science and healthcare solidifies its global leadership in these fields.

Niches



Immunology

Application area / Therapeutic Area	Oncology
(University) Hospitals / Universities / Research institutes involved	Radboud UMC; Utrecht UMC; Maastricht UMC; et al.
Leading companies / disruptors / best practices	MSD (Keytruda); Glycostem; ImmunoPrecise Antibodies Europe; Acerta Pharma; Citryll Lead Pharma; NTRC; Enpicom
Leading cooperative program	European Lead Factory (Pivot Park Screening Center)
Facilities / Locations / Campuses	Pivot Park Oss

Drug Discovery & Development

Application area / Therapeutic Area	(Bio)Pharmaceuticals
(University) Hospitals / Universities / Research institutes involved	Pivot Park Screening Center; Radboud UMC; Utrecht UMC; Erasmus UMC, Amsterdam UMC, of the KU Leuven; et al Centre for Drug Design and Discovery (CD3)
Leading companies / disruptors / best practices	MSD (Merck & Co.); Aspen; Acerta Pharma (Astra Zeneca); Glycostem Therapeutics; Citryll, Lead Pharma; BioConnection; Synaffix; Ardena; ADC Therapeutics; Cytura Therapeutics; ImmunoPrecise Antibodies - Europe; NTRC;
Leading cooperative program	European Lead Factory (ELF)
Facilities / Locations / Campuses	Pivot Park, Oss; High Tech Campus Eindhoven; NovioTech Campus, Nijmegen

Regenerative Medicine / Regenerative Engineering & Biomaterials

Application area / Therapeutic Area	Orthopedic; cardiovascular
(University) Hospitals / Universities / Research institutes involved	TU/e Eindhoven; Radboud UMC a.o. UMCs in the Netherlands and Belgium
Leading companies / disruptors / best practices	Xeltis; LifeTec Group; Osteo-Pharma; Fujifilm; SupraPolix, Vivolta; SyMO-Chem
Leading cooperative projects / programs	RegMed XB; ICMS
Facilities / Locations / Campuses	High Tech Campus Eindhoven; TU/e Campus

Source: Verdiepende studie Life Sciences & Health

Animal Health	
Technical niche / Application area / Therapeutic Area	Healthcare & Nutrition for animals, both companion and farm animals
(University) Hospitals / Universities / Research institutes involved	Utrecht University Hospital & University; Wageningen University & Research; Eindhoven University of Technology
Leading companies / disruptors / best practices	MSD (Merck) Animal Health; Hendrix Genetics; Nutreco; Marel Poultry; Covetrus; Dechra Veterinary products; Dopharma; Floris Pharma; Perstorp; Produlab Pharma, FF Chemicals, Charles River Laboratories; Royal Canin (MARS); MS Schippers; AgriFirm; Nijssen / Granico (Limburg)
Leading cooperative projects / programs	AnIMAI Group SENSOR - IMAGEN
Facilities / Locations / Campuses	Boxmeer Health Campus

Imaging, Diagnostics & Monitoring	
Technical niche / Application area / Therapeutic Area	Imaging, Diagnostics & Monitoring, Diagnosis; treatment determination; facilitation of treatment; health monitoring; aftercare monitoring; recovery monitoring
(University) Hospitals / Universities / Research institutes involved	TU/e, Eindhoven University of Technology; Holst Centre; Radboud UMC; Catharina Hospital; Jeroen Bosch Hospital; Maxima Medical Center; Kempenhaeghe Epilepsy and Sleep Center; other UMCs
Leading companies / disruptors / best practices	Philips Healthcare; GE Healthcare Life Sciences Core Imaging; Teledyne Dalsa; Thermo Fisher Scientific; Bambi Belt; LifeSense; Phenom; NTS Group; Sioux Technologies; Adimec
Leading cooperative projects / programs	e/MTIC, Eindhoven MedTech Innovation Center
Facilities / Locations / Campuses	High Tech Campus Eindhoven; TU/e University Campus; Healthcare Campus Philips (Best); Catharina Hospital and Maxima Medical Center (Eindhoven), Kempenhaeghe Epilepsy and Sleep Center (Heeze), TU/e, Eindhoven University of Technology and Royal Philips (Eindhoven / Best)

Source: Verdiepende studie Life Sciences & Health

Robotics in Healthcare	
Application area / Therapeutic Area	Surgery; Care
(University) Hospitals / Universities / Research institutes involved	TU/e Eindhoven; Maxima Medical Center; Catharina Hospital; Jeroen Bosch Hospital, Maastricht University Medical Center; Rotterdam Eye Hospital
Leading companies / disruptors / best practices	EMR, Eindhoven Medical Robotics; MicroSure; PrecEyes
Facilities / Locations / Campuses	TU/e Campus; High Tech Campus Eindhoven
High Complexity Machines	
Application area / Therapeutic Area	Complex machinery used in biopharmaceutical R&D and manufacturing; also used in development and manufacturing of robotic systems in healthcare
(University) Hospitals / Universities / Research institutes involved	TU/e Eindhoven; Holst Centre; Catharina Hospital; Maxima Medical Center; JADS
Leading companies / disruptors / best practices	ASML; KMWE Group; NTS Group; Demcon Group; Sioux Technologies; Thermo Fisher Scientific (FEI); VDL-ETG; Royal Philips; GE Healthcare Life Sciences Core Imaging; OMRON; Neways Technologies; Frencken Mechatronics; Applied Micro Electronics (AME); Tha-les Cryogenics; Adimec; Luminex; VanBerlo Group; AAE (The Art of Mechatronics)
Leading cooperative projects / programs	Brainport Industries; BIC – Brainport Industries Campus
Facilities / Locations / Campuses	High Tech Campus Eindhoven; TU/e Campus Eindhoven; BIC – Brainport Industries Campus

Source: Verdiepende studie Life Sciences & Health

Data Science & Big Data in Healthcare	
Application area / Therapeutic Area	Support of care, diagnosis and cure in Healthcare
(University) Hospitals / Universities / Research institutes involved	TU/e Eindhoven; JADS (Jheronimus Bosch Academy of Data Science); Tilburg University; Holst Centre; Catharina Hospital; Maxima Medical Center; Kempenhaeghe Epilepsy and Sleep Center
Leading companies / disruptors / best practices	Philips Healthcare; Sioux Technologies; Salvia BioElectronics; Enpicom; GE Healthcare, Life Sciences Core Imaging; The SleepCompany; Additive Industries; InProcess-LSP
Leading cooperative projects / programs	e/MTIC – Eindhoven MedTech Innovation Center
Facilities / Locations / Campuses	High Tech Campus Eindhoven; TU/e Campus Eindhoven, Mariënborg Campus Den Bosch

Source: Verdiepende studie Life Sciences & Health