

The ZEISS Innovation Hub Dresden



Dr. Tilman von Strauwitz Innovation Scout @ZEISS

ZEISS classification: Restricted

Innovation Scouting and Management at ZEISS

ZEISS Innovation Hub Dresden



Dr. Tilman von Strauwitz

25. Oktober 2023



Who is Tilman? A little bit about me





Studies of Materials Science 2009 - 2015





TECHNISCHE UNIVERSITÄT DRESDEN

Since 2022 **Innovation Scout**











Publishing name ORCID

0000-0002-6350-3399

37 peer reviewed publications, 2 book chapters, + proceedings + manuscripts/patents under review/in preparation

Tilman Ahlfeld

Georg Helm Prize 2021 PhD Thesis Award of the German Society for Biomaterials





A variety of technologies and markets



ZEISS





Shaping the Future - ZEISS Segments

	POR	TFOLIO		
Semiconductor	Industrial	Medical	Consumer	
Manufacturing Technology	Quality & Research	Technology	Markets	
	7EICC Corporate Desearch and	Technology (incl. Innovation Hubs)		
7FISS Ventures				
ZEISS Shared Production Unit (incl. ZEISS spectroscopy and sensors)				
	ZEISS Digital Partners (incl. software building and innovation teams)			
		A CONTROL OF		
2.757 € billion in revenue	2.066 € billion in revenue	2.251 € billion in revenue	1.569 € billion in revenue	
6,215 employees	7,534 employees	6,829 employees	13,008 employees	

Numbers of 2021/2022 → New numbers will be updated very soon!



ZEISS Contributions as **Enabling Partner**

More than **30** Nobel laureates

used ZEISS systems to advance scientific progress



made on ASML lithography systems with ZEISS optics

More than **50** camera lenses were sent to space during the NASA space missions

3 technical Oscars

were conferred on ZEISS lenses and movies filmed using ZEISS lenses have received numerous Oscar-nominations

600,000 surgical procedures every year with the ZEISS KINEVO 900 FACTS

Numbers of 2021/2022 → New numbers will be updated very soon!



New patent applications

638

R&D investments in € million

.151

Investment by % of revenue

13%

Investments in Research & Development

Innovations shape the future: Research and development teams at ZEISS are working hard to constantly expand our role as technology leader and market shaper. ZEISS has been making sustainable investments in R&D in order to achieve this goal. FACTS

Numbers of 2021/2022 \rightarrow New numbers will be updated very soon!



ZEISS Worldwide

Employees



Locations worldwide (rounded)



Countries (rounded)

50

Headquarters: Oberkochen, Germany





Ensuring Stability The Carl Zeiss Foundation

The Carl Zeiss Foundation is the sole shareholder of Carl Zeiss AG. This special ownership structure ensures stability and long-term-orientation.





Thinking and Acting Sustainably Focus on Sustainability

As part of its corporate strategy, ZEISS has placed the focus of its sustainability efforts on three topics and has set itself specific targets for the period up to 2025.



Value for Society



Climate Action



Circular Economy



Attractive Employer with unique culture

ZEISS is an ideal employer for exceptional, dedicated talents. ZEISS offers its employees opportunities to actively shape the future.

Winning Team

38,770	Employees worldwide
5,254	Employees R&D
570	Trainees worldwide

ZEISS

Dresden Innovation Hub **WHY?**



Rationale for ZEISS Innovation Hubs:

• **To fill current and future competence gaps**, through:

(a) research collaboration with academic partners,(b) interaction with local startups and incubators,

(c) talent attraction for ZEISS locally and globally.

Create a setting for long-term & explorative innovation.

Why Dresden:

- broad research ecosystem (e.g., DRESDEN-concept) in:
 - o medicine / biotechnology / life sciences
 - o microelectronics / computer science
 - o artificial intelligence / machine learning
 - o nanotechnology / materials research
 - o robotics / human-machine interaction
- existing ZEISS presence with Zeiss Digital Innovation, Carl Zeiss Innovationszentrum f
 ür Messtechnik (IZM)
- Growing relevance for broader industry
 - o Bosch Wafer Fab
 - o VW "Gläserne Manufaktur"





A research alliance of TU Dresden, the university hospital and 30 partner institutes, including Fraunhofer, Max Planck, Leibniz institutes

ZEISS Innovation Hub DD Embedding ZEISS in the Dresden innovation ecosystem





22.02.2021

Strategische Zusammenarbeit: ZEISS und die TU Dresden kooperieren ZEISS wird in den nächsten Jahren seine Präsenz in

Dresden ausbauen, um von dem hervorragenden Forschungs- und Innovationsumfeld zu profitieren.

> Mehr über das Thema erfahren



22.02.2021

STRATEGISCHE ZUSAMMENARBEIT: TU DRESDEN UND ZEISS BAUEN KOOPERATION AUS



Die Technische Universität Dresden und die Carl Zeiss AG planen den Aufbau einer langfristigen strategischen Partnerschaft. Prof. Ursula M. Staudinger, Rektorin der TU Dresden und Dr. Karl Lamprecht, Vorstandsvorsitzender der ZEISS Gruppe, haben am Mittwoch, den 17. Februar 2021, einen entsprechenden Kooperationsvertrag zwischen der TU Dresden und der ZEISS Gruppe unterschrieben. Die im Rahmen eines virtuellen Treffens erfolgte Unterzeichnung soll die Verbindung der beiden Institutionen in den Bereichen Forschung, Lehre und Innovation, Weiterbildung und Internationalisierung sowie Recruiting festigen.



09.06.2021

Startschuss für den ZEISS Innovation Hub Dresden

Team bezieht Räumlichkeiten im EKFZ auf dem Campus des Universitätsklinikums

Mit dem ZEISS Innovation Hub Dresden bauen ZEISS und die Technische Universität Dresden ihre strategische Zusammenarbeit, die ein wichtiger Baustein der globalen Innovationsstrategie von ZEISS ist, weiter aus.

> Mehr über das Thema erfahren

ZEISS bündelt Know-how in Dresden

"Die Nähe zur TU Dresden ist für unser Unternehmen seit vielen Jahren ein großer Standortvorteil und hat unzählige Projekte beflügelt", erklärt Alfred Mönch, Geschäftsführer der ZEISS Digital Innovation, "Von den Synergieeffekten aus der Zusammenarbeit mit Forschung und Lehre in Dresden sollen auch die anderen ZEISS Unternehmen profitieren, und wir freuen uns schon sehr auf den stärkeren Austausch."

Die ZEISS Gruppe ist in Dresden mit drei Unternehmen präsent. Dazu zählen neben der ZEISS Digital Innovation am Fritz-Foerster-Platz der ZEISS Innovation Hub Dresden auf dem Campus des Universitätsklinikums Carl Gustav Carus und die ZEISS Industrial Quality Solutions (vormals Carl Zeiss Innovationszentrum für Messtechnik) im Business Park an der Bertolt- Brecht-Allee.

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The electric light did not come from the continuous improvement of candles.

Oren Harari

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How to find disruptive market scenarios **Technology-driven innovation**





Carl Zeiss AG, CRT

Our ambition



- first with "confidators", later with MVPs
- that proof technological feasibility
- that have received positive feedback on desirability from first users
- with a (in the long run) viable business model

We think long-term

- on innovations that have the potential to shape markets within the next 10-20 years
- we work hypothesis-driven
- future scenarios and roadmaps
- we **think big, but start small** with concrete projects

Turning today's research into tomorrow's applications – together.

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We work on technology-inspired innovation that

- is based on technology with a TRL of 2-6
- poses a disruptive threat
- offers growth opportunities in H3 or beyond current strategic business unit roadmaps

We work with partners who

- have profound technological expertise
- have the ambition to turn technology into innovation
- value our knowledge in technology and ideas

ZEISS Innovations Hub Transfer projects and partners



Main Topics

Focus Field: Engineered Biology

Other

Organoids & Organ-on-chip for drug research and personalised medicine



Laser-Matter Interaction for medicine and materials' functionalization

Bio-Engineered Implants for therapy



Novel Concepts for Diagnostics for diseases in and beyond the eye

Novel Sensors e.g. bio-nose-on-chip







Megatrends as basis for new opportunities for ZEISS

- New Technologies, Digitalization (together with ZEISS Digital Innovation) and Networking
- Demographic Development and Healthcare
- Globalization
- Sustainability



Seeing beyond

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