



Employer Sponsorship Guide

# Quantum Technologies Overview Course

## Congratulations!

– You can already give yourself some credit for taking the first step towards completing this expert development program. Education is one of the best investments you can make for your career and personal growth. An investment that will not only help to secure your future competitiveness but one that will have a tangible impact on the success of your professional environment.

We at TUM Institute for LifeLong Learning are well aware that company support is a key aspect for professionals in their pursuit of further education. In order to help you find balance between the demands of work and private life, we would like to equip you with good arguments for your further education plans. In this guide, you will find useful tips on how to secure company sponsorship and make a case for how your further development can support your team, company and industry.

We are always happy to provide you with personal consultation to help answer your individual questions. Our Program Managers are experienced Learning & Development professionals, who are happy to support you with your personal training decisions.

We warmly welcome you to lifelong learning at TUM!



**Bernhard Kraus**

Managing Director TUM Institute for LifeLong Learning

This guide provides:

- 1. How to secure Company Sponsorship
- 2. Industry Facts
- 3. Company benefits
- 4. How to overcome company hurdles
- 5. Guidance for a self-paid participation

# 1. How to secure Company Sponsorship

By talking to your employer about your further education interests, you are showing that you keep track of industry trends and future demands and are willing to take action to improve your skills. Doing so, you might open up new career perspectives for yourself as well as the opportunity to secure your company's support – both in terms of time and finances.



With **indirect Sponsorship** your company allows you to use part of your working time or take additional holiday days to complete a continuing education course. Being able to study during your working time is a big benefit as it helps you to balance your education, private and working time and is already a strong commitment from your employer.



With **direct Sponsorship** the employer commits to paying or reimbursing your participation costs in whole or in part. Please note that it is quite common for companies to sponsor 50% or 75% of the costs instead of paying the full fee. Some companies like to see that you are also personally ready to invest in your further education as a sure sign that you are serious about the program.

Many companies have a yearly training budget allocated for their employees. By showing initiative, you could receive further training support on a yearly basis. In many cases, employers can make deductions in the company's tax burden, if they sponsor your further education.

When talking to your employer to negotiate direct or indirect sponsorship, we recommend preparing the following arguments:

- ✓ **PERSONAL IMPACT** – elaborate on how the program can help you better perform in your current role with your ongoing tasks and projects.
- ✓ **TEAM IMPACT** – offer to share key learnings from the program with your manager and the team on a regular basis.
- ✓ **BUSINESS IMPACT** – explain how knowledge from the program will help the organization to make better business decisions, win new clients, improve your operations, act more sustainably etc.
- ✓ **CAREER IMPACT** – elaborate how this program can help you to step into a future role or to take over additional projects and responsibilities that are strategically important for the organization.



## 2. Industry facts

**Industry facts** about Quantum Computing that must convince every employer:

- 1. Quantum computing, quantum sensing and quantum communications could transform numerous markets because of their unique capabilities. Therefore, many tech companies and startups have already invested significant sums in quantum technologies (2.1 billion USD in 2021). Most of the investments are supporting quantum computing initiatives <sup>[1]</sup>.
- 2. Many companies have already started to look into quantum computing and have some in-house quantum computing program. <sup>[2]</sup>.
- 3. Analogue quantum simulations have entered the regime of practical quantum advantage for scientific problems and offer opportunities for industrial applications <sup>[3]</sup>.
- 4. Quantum sensors are rapidly commercializing, they will become day-to-day realities in areas as far apart as air traffic control and healthcare. <sup>[8]</sup>
- 5. Quantum communication is an emerging technology that can be used for the secure transmission of information. One application example, quantum key distribution, is already-available commercially from some vendors. <sup>[9]</sup>

## 3. Company benefits

**Company benefits** of TUM's Quantum Computing Program supporting your sponsorship request:

- 1. Further training opportunities improve employee retention <sup>[4]</sup>.
- 2. There is a lack of professionals in this field. Over 50% of quantum companies are currently looking for new employees <sup>[5]</sup>.
- 3. For every three open positions in quantum, there is only one qualified applicant <sup>[6]</sup>.
- 4. MIT Professor William Oliver warned in 2019 that a lack of scientists and engineers in the field of quantum might impede the growth of that technology <sup>[7]</sup>. It is time to start training your experts now!

Sources: <sup>[1]</sup> McKinsey, 2021, <sup>[2]</sup> Hyperion Research survey, 2021, <sup>[3]</sup> Nature 607, 667, 2022, <sup>[4]</sup> Bundesministerium für Arbeit und Soziales, 2019, <sup>[5]</sup> World Economic Forum, 2022, <sup>[6]</sup> McKinseyDigital, 2022, <sup>[7]</sup> Quantum Strategy Institute, 2021, <sup>[8]</sup> Inside Quantum Technology Research, April 2022, <sup>[9]</sup> Joint Research Center technical report, 2019



## 4. How to overcome company hurdles

The two major reasons why companies hesitate to support further education needs are budget and time issues.

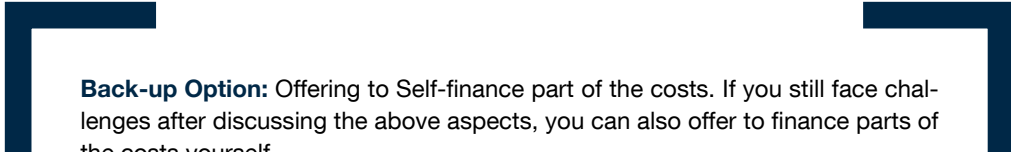
### If your challenge is the price:

**Price & program value comparisons - preparation is the key!** Do your homework and showcase what value this specific program will bring compared to other offerings in the market. Even if the price would be higher than with other providers, you can already show why this program still better fits you and the needs of your company. When comparing prices do remember to include travel and lodging costs in your considerations.

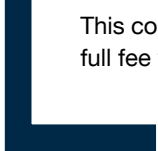
**Tax benefits for the company** – In Germany and in many other countries, companies can deduct further education costs from a company's tax burden. This means that your employer is likely to end up paying much less for the program in the end, after they receive tax benefits for sponsoring you.

**Budget-year thinking & personal agreements** – If you do not get support in one tax year, you could already start negotiating about the training budget and related opportunities for the upcoming year. Companies usually have more money for training needs at the beginning of the tax year.

**What are the alternative costs for not participating in the program?** If you do not pursue further education, your company will lose the learning that you could have accumulated in this program. Every decision has also a trade-off cost: you might lose a chance to improve your productivity, a chance to help your company to win new clients and to help your company to create efficient processes.



**Back-up Option:** Offering to Self-finance part of the costs. If you still face challenges after discussing the above aspects, you can also offer to finance parts of the costs yourself.



This could still help you to get some sponsorship instead of ending up to pay the full fee yourself, in case you do not get any support.

### If your challenge is the time commitment:

**Further education programs are designed for full-time working professionals** – Most of our further education programs are split into separate modules that take place over a course of several weeks or months, are short or conducted in a hybrid form, meaning that you only need to attend a physical training in some parts of the program. The average time requirement per week varies usually from around 2 – 10 hours per week, depending on the course. Nothing impossible to organize!

**Flexibility from holidays & hour banks** – If your employer is still concerned about your absence - especially due to on-site trainings - do not forget the option to invest personal hour banks or annual holiday days. If you conduct the biggest blocks of your program during your personal leave days, your employer has even less reason to worry about the program's impact on your work performance.

## 5. Guidance for a self-paid participation

In case your company is not able to support your educational plans, there are other monetary benefits to consider:

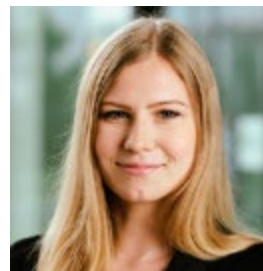
**Personal income tax benefits** – up to 30-50 % of the fees, travel & lodging

In Germany as well as in many other countries, employees as well as self-employed entrepreneurs can deduct further education costs in their annual taxation. This means that you can **get back up to 30-50 %** of the program costs by claiming them in your annual tax return. In addition to the program fees, you can usually also claim occurring travel and lodging costs.

Please note that we are not official tax advisors and the tax benefits are subject to changes. Therefore, we do strongly recommend discussing these options in detail with your personal tax advisor.

### PRICE DEDUCTION MODELS

The program is funded by the German Federal Ministry of Education and Research under the funding guideline “Quantum Futur Education”. Therefore, we can offer the partially funded price of 2.850€ in 2023 to the organizations of the QL3 Advisory Board, TUM & LMU alumni. 10% discount for members or employees of our strategic cooperation partners (see website).



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Please, do not hesitate to reach out to us for any further questions or requests. We are happy to help you in realizing your further education plans.

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