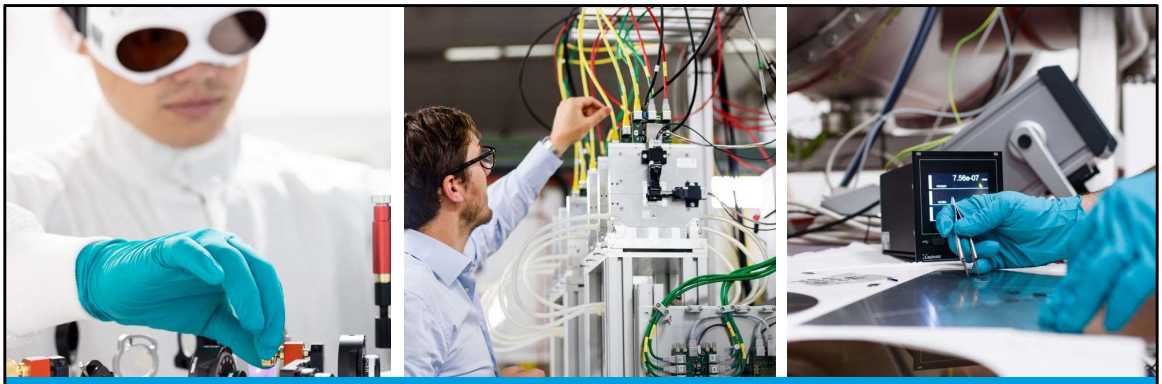

MSCA COFUND ENGAGE workshop

"Introduction to Intellectual Property, Use and Exploitation of Software"

ONLINE, June 5th, 2024

Dr. Janine Fischer & Stephanie Maier
Innovation & Technologietransfer (ITT)
Technology Transfer Office (TTO), DESY

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INNOVATION & TECHNOLOGIE TRANSFER

We want to welcome you to our **MSCA COFUND ENGAGE workshop** with the topic **"Introduction to Intellectual Property, Use and Exploitation of Software"** in the frame of the **EU Engage project**.

Disclaimer

The information provided in this presentation is for educational and informational purposes only. The content does not constitute legal advice and should not be relied upon as such.

For legal advice, please consult a qualified legal professional.

What is the **agenda for today**?

I will tell you more about the **speakers** and their **background.**

Then Stephanie Maier will tell you more about the **Innovation and Technology Transfer** at DESY. We will discuss what **Intellectual property** (IP) is and how you can protect your IP, more concrete, how you can protect your IP through a **patent**.

Then our speaker Janine Fischer will tell us more about the **Use, transfer and exploitation of research software**.

At the end we will do a **wrap –up** with **final messages** and you can ask **questions**.

Dr. Janine Fischer

Studied „Molecular Life Sciences“ (B.Sc.), „Biomedical Engineering” (M.Sc.) and “Information Law” (Diploma of Advanced Studies in LL.M. Study Program)
Responsible at DESY for IP management and licensing; project lead for the “DESY Software Innovation Hub”

Dr. Stephanie Maier

Stephanie Maier studied Bioengineering in Munich and then completed her Master's degree in Medical Technology at the Technical University of Munich.

She then completed her PhD in Physics at the Max Planck Institute for the Structure and Dynamics of Matter (MPSD) in Hamburg in the field of laser system development for surgery.

She also worked at the startup Hepa Wash GmbH in Munich, (today: ADVITOS GmbH) as development engineer in the field of R&D for controls engineering, hardware and software tests.

Afterwards she worked in a patent law firm before joining DESY's Innovation and Technology Transfer Department (ITT) in the field of inventions and patents.

Thank you for the kind **introduction**, Jayesh. And thank you very much for **inviting** us today to give this talk.

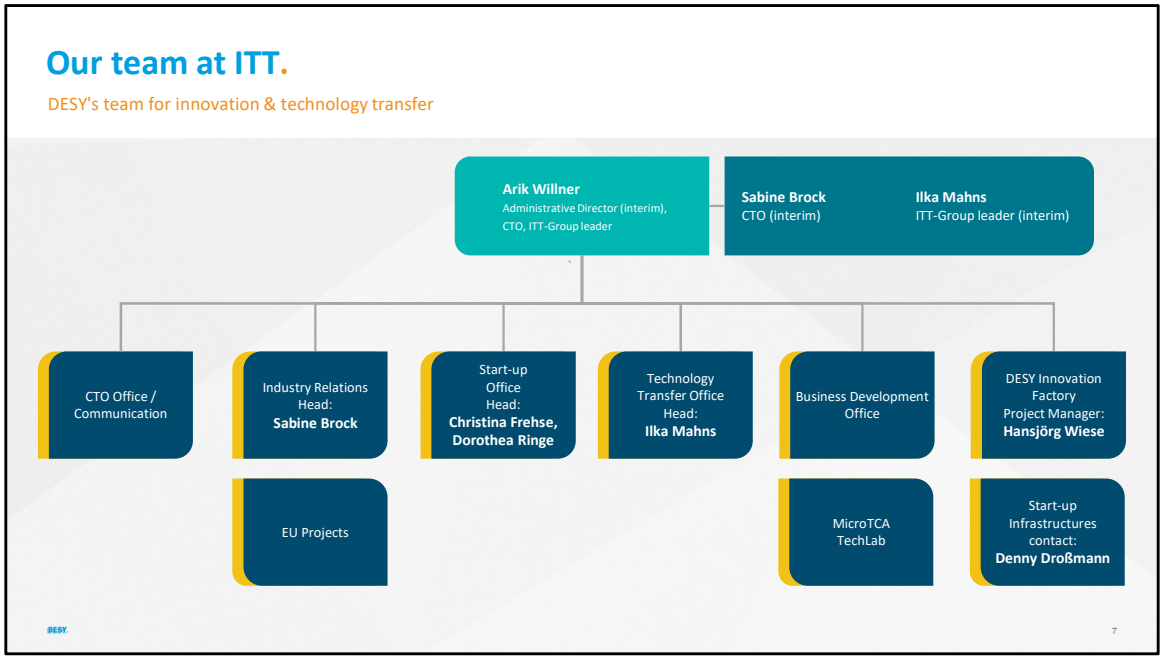
Now we come to the **second point of the agenda** „Innovation & Technology Transfer at DESY".

At DESY we have a **innovation strategy**. The DESY innovation strategy should provide **all-in solutions** for society and industry.

The DESY innovation strategy is based on the **Large-Scale research facilities**. With these we develop **methods & technology competence.** And this is only possible with **personnel and know-how.** All this contributes to the **Innovation ecosystem**.

As **part of our innovation strategy**, we want to think about innovation and transfer in all projects **directly from the start**. So the **scientific diversity and excellence** of DESY are combined with a strong **innovative infrastructure**.

DESY should be established as a **center of excellence and expertise** not only **for the scientific community** but also for **regional and international industry partners**.



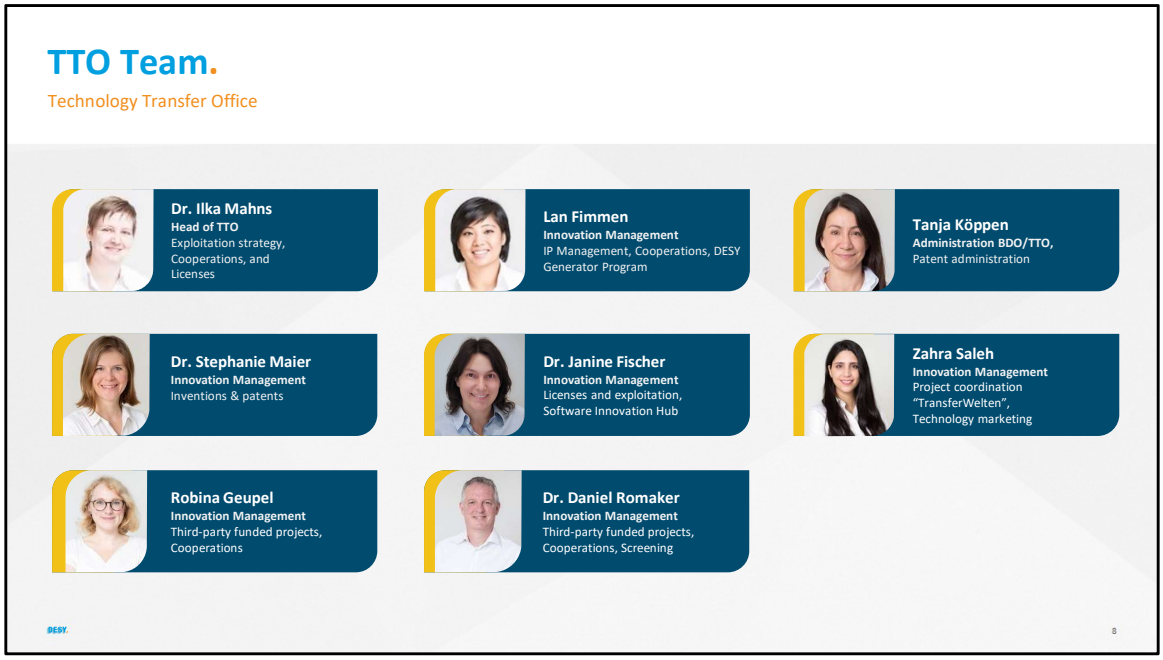
For this mission, the **Innovation & Technology Transfer** group **(ITT)** has been established with a **Chief Technology Officer** as the head of this group.

The ITT- department serves as the i**nterface** between **DESY experts** on the one side and **industrial partners** on the other side.

ITT is divided in **sub-units**: the CTO Office / Communication, Industry relations, the start-Up office, Technology Transfer Office, Business Development Office, and the DESY Innovation Factory.

We also have EU projects, Micro TCA TechLab and Start-Up Infrastructures.

Janine and I are from the **Technology Transfer Office**, short: **TTO**.



And here you can see the **Team** of the **Technology Transfer Office (TTO).**

We are **eight people** at the moment and we **support DESY researchers** to bring **ideas and technologies** from **research** closer to the **market or industry**.

You can also find us on the **ITT homepage**. And if you have any **questions**, please do not hesitate to **contact us**.

Technology Transfer Office (TTO)

Activities

- Protection of the Intellectual Properties (IP) **generated at DESY**
- **Technology Screenings** for early identification of innovations with exploitation potential
- Identification of **confidential know-how**
- Development of **exploitation strategies**
- **Inventions** & **patents**
- **Cooperation** and **validation projects** with **industrial partners**
- **Licensing** of technologies including DESY know-how as well as patent applications
- Networking in various working groups (different topics/sectors)
- **Internal training** to raise awareness of IP protection and exploitation opportunities

Main Activities: IP protection and **Exploitation of DESY technologies**

DESY. 9

So what are the **activities** of TTO?

One of the **most important activity** is the „Protection of the Intellectual Properties (IP) **generated at DESY.**

With the help of **Technology Screenings,** we try to identify innovations with exploitation potential at an early stage.

Further important activities are the Identification of **confidential know-how,** development of **exploitation strategies** and also help you with **inventions and patents.**

Following to these steps DESY is actively searching for industry partners for bringing the technology into application. We help you to set up **cooperation** and **validation projects** with **industrial partners.**

And if this is successful, we do the **Licensing** of technologies including DESY know-how as well as patent applications.

Other activities are **Networking** in various working groups.

And offering **Internal trainings** to raise awareness of IP protection and exploitation opportunities. →So like what we are doing here today.

This was a **short description** of the **department ITT**.

Now we come to the **question**: What is intellectual Property IP?

Information about the following Slides.

EPO and EUIPO is the provider of the original IP Teaching Kit (IPTK).

Changes have been made to the original material, that the modified or translated version has not been authorised by the EPO and EUIPO, and that the EPO and EUIPO shall not be responsible for the correctness of any such modified or translated version.

Intellectual Properties (IP): Definition

> **Intellectual Properties (IP)** covers all property rights in creations of the human intellect
→ for example: inventions, know-how, software, experimental results, data …

> **Intellectual Properties rights (IPR)** refers to all the rights that protect these individual intellectual achievements
→ patent and utility model rights in respect of inventions
or copyright in respect of works of science, literature and art (incl. software)
or design rights or trademarks

DESY. 12

Let us start with the **definition** of Intellectual property (IP).

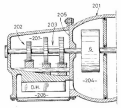
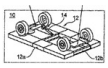
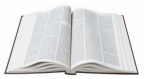
Intellectual Properties (IP) covers all property rights in creations of the human intellect.
So if you are **working in your projects** and **doing research**, you are **producing a lot of IP**
→ for example: inventions, know-how, software, experimental results, data …

IP is protected by **law** through**Intellectual Properties rights (IPR).** →

1. We have here **patent and utility model rights** in respect of inventions
2. **Copyright** in respect of works of science, literature and art (incl. software)
3. or **design rights** or **trademarks.**

The **main purpose** of **intellectual property right** is to **encourage** the **creation of intellectual goods**. **Inventors, artists, scientists and businesses** put a lot of **time, money, energy** and thought into developing their innovations and creations. To **encourage** them to do that, they need the chance to make a fair **return on their investment/ rewards**. Therefor are the IP rights to protect their intellectual property. These **economic incentives** are expected to encourage innovations.

The different types of IP-Protection (I)

Legal rights	What for?	How?	
Patents	New inventions	Application and examination	
Utility models	New inventions	Application and registration	
Copyright	Original creative or artistic forms	Exists automatically	

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This bring us to the questions: Which different **types of IP rights** exists and how can you get this protection?

For **new inventions** we have two possibilities. One is to protect your invention through a **patent.**

1. Patents are granted for **technical inventions** as you see in the **picture**, this could be a **solution** to a specific **technological problem**, which may be a **product** or a **process** or an **apparatus** .
2. For a patent you have to file an **application** at a patent office, and the **patent office** will do an **examination.** If the application fulfills certain **requirements**, the patent is **granted**. What are the requirements, I will discuss later.
3. A patent lasts for a **limited period of time**, generally **20 years** after filing the **patent application**.

Another way to protect an invention is through a **utility model**

1. A Utility model offers a **simpler way** to get protection for technical inventions. In Germany we call it the **small siste**r of a patent. In **comparison** to a patent, it just protects **products** but **not processes** (manufacturing and working processes) and the **protection duration** is shorter. In general up to **10 years** after filing the **application**.
2. For **getting** an Utility model you also have to file an **application**, but the application will **not be examined**. I will be **just registered** after a **check** if all **formalities** are fulfilled. But if a **third party** is filing a request for the cancellation of the utility model an substantial examination will then be performed by the office.
3. It also has to be mentioned that Utility models **can´t be registered** in the **America, Great Britain** and **Canada.**

This are the two IPRs protecting technical invention. But what about **literature, or scientific and artistic work.**

1. These **works** are protected by **Copyrights**. A Copyright does **not** need to be **registered**. It **automatically exists** when a work is created. It protects **any type of original, creative expression**, not just **books, music, paintings,** and **films**. But also **computer programs, databases, advertisement, maps, technical drawing**…

2. More about copyrights will follow later.

The different types of IP-Protection (II)

Legal right	What for?	How?	
Trade marks	Distinctive identification of products or services	Use and/or registration	
Registered designs	External appearance	Registration	
Trade secrets	Valuable information not known to the public	Reasonable efforts to keep secret	

DESY. This slide is a modified version of a slide from the Intellectual Property Teaching Kit from the EPO. 14

Let's continue with **trademarks.**

1. Trade marks are **distinctive signs** indicating the **source** of a **product** or **service**. All **sorts of signs** may be used as trademarks – **words, letters, numbers, symbols, colors, pictures**, **holograms, sounds**, **even tastes and smells**.
2. The **requirement** for **registration of a trademark** is that it must be **distinctive**, so it **cannot** just be a **generic description** of the **product or service**. Nor can it be **identical** (or very similar) to a **trademark** already **registered or used** for that type of product or service.
3. You can get the protection by **registration** or **just using** it, but the **registration** provides a **stronger protection.**
4. Trade marks last only a **limited time period, but** can be **extended** as **often as you like**.

Then we have **registered designs.**

1. Registered designs **protect** the **external appearance** of a product, such as **new patterns, ornaments and shapes**. They do not give **any protection** for **technical aspects**.
2. Designs need to be **original** and **distinctive**.
3. Design rights **last** for a **limited period**. This **varies among countries**, but the **maximum period of protection** in a country will be **at least ten years**. In many countries, **owners** need to **renew their registration every few years** if they want to keep the design protected for the maximum possible period.

Trade secrets cover **information not known to the public**. If the owner of the information is taking **reasonable effort** to **keep it confidential**, he can **sue** anyone who **steals the secret information**.

One product - many IP rights

Trade marks
- NOKIA
- Product "208"
- Start-up tone

Copyright
- Software
- User manuals
- Ringtones
- Start-up tone
- Images

Patents and utility models
- Data-processing methods
- Operating system
- Operation of user interface

Designs
- Form of overall phone
- Arrangement and shape of buttons
- Position and shape of screen

Trade secrets
- Some technical know-how kept "in-house" and not published

DESY. This slide is a modified version of a slide from the Intellectual Property Teaching Kit from the EPO. 15

This slide shows the **wide range** of intellectual property rights that can be involved in protecting a **single product**, in this case a mobile phone.

This can be **trade marks** such as the **name of the company** or **product**.

Then you have **copyright** for the **software or user manuals.**

Often you have also **patents and utility models** for example for data-processing methods.

And there are **designs** for the **form of the cell phone.**

And you also have **trade secrets** that a some technical know-how kept “in-house” and are not published.

Importance of IP Protection

Innovators
make significant investments in developing new products

Competitors
benefit from their efforts

Heavy pressure
may drive the innovator out of business

Can offer similar or identical products at a cheaper price

Get a free ride on the back of the innovator's creativity and inventiveness

IP system
Rights over the use of inventions, designs, brands, literary and artistic works

DESY. This slide is a modified version of a slide from the Intellectual Property Teaching Kit from the EPO. 16

Now we come to the **importance** of the **IP Protection**. What is the **idea** behind this **IP-system**?

Let us think about an **environment without IPRs**:

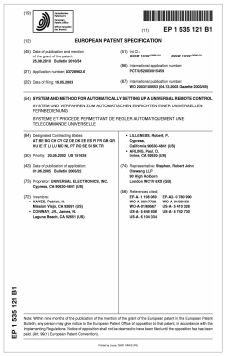
1. Whenever a **new product** is successful on the **market**, it is very likely that **competitors** will attempt to **make similar or identical products.**
2. The innovator will probably have make significant investments in developing the new product.
3. Competitors can **benefit** from these **efforts**. They can have **greater market access**, a **better connection with distributors**, and access to **cheaper primary resources**. As a result they are able to offer similar or identical products at a **cheaper price**.
4. Innovators are then **under heavy pressure** and may **be driven out of business**, while **competitors** get a **free ride** on the back of the innovator's creativity and inventiveness.

This is an **unfair situation** for an innovator. It would **not motivate** him/she to **develop further** innovation.

The **IP system** is there to **help innovators protect their inventions, designs, brands, artistic works**, and so on.
1. It provides them with **ownership over their work** and **the rights to exclude competitors** from the **production, import or selling** their **protected idea**.
2. This **rewards** them for **their effort** and **so encourages more innovation.**

Now we come to the **question in more detail**: What is a patent?

What is a patent?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EUROPEAN PATENT SPECIFICATION

Patents are granted in nearly every country in the world!

> A **legal title** which grants the holder
- the exclusive right to prevent others from making, using or offering for sale, selling or importing a product that infringes his patent without his authorisation (exceptions: private use, academic research)
- in countries for which the patent was granted
- for a limited time (up to 20 years).

> In **return for this protection**, the holder has to disclose the invention to the public.

Patent applicant

Reveal invention (disclosure)

Get exclusivity (patent)

Public

DESY. This slide is a modified version of a slide from the Intellectual Property Teaching Kit from the EPO. 18

A patent is sometimes considered as a **contract** between the **applicant** and the **society**.

So it is a legal title which grants the holder the **exclusive right** to prevent other people from making, using or selling for example a product.

1. That is **protected** by a patent.
2. There are also **exceptions** for the protection, for example **private use**. As **private person**, you do not have to care about patents. Next exception, is **academic research**. These are then **non-commercial purposes** that are not protected.
3. Another **important point** is that this protection exits **only in countries for which** the patent is **granted**. Patents are **granted** in **nearly every country** in the world, but the **applicants** have to decide in **which countries** they want to **apply** for a patent. This is always a **matter of costs,** because for **every country** you have to pay **money**.
4. Another important point is that the **protection** is only for a **limited time** (up to 20 years).

In **return** for this protection, the holder has to **disclose** the invention to the **public**. As a **rule**, patent offices publish applications after **18 months**. At this stage, they become **visible** to everyone.

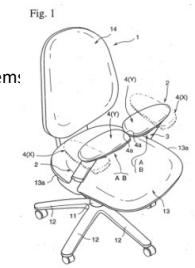
At the left bottom, you see again the contract between the **applicant** and the **society.** So the invention is **disclosed** to the **public** and therefore the applicant get **exclusivity** for a **limited time**.

This **social** contract is **institutionalized** in form of the **patent law.**

What exactly can be patented?

Patents protect inventions which solve technical problems:

- chemical substances, pharmaceuticals
- processes, methods, uses
- products, devices, systems



In most countries, patents are not granted for business methods or rules of games as such, or for methods of treatment, diagnostics and surgery on the human or animal body.

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Now is the **question**: What exactly can be patented?

In general, you can say **patents** protect inventions which solve a technical problems.
Examples are chemical substances, pharmaceuticals , but also processes or methods and products, devices, and systems.

But you can't patent here everything, there are also **exceptions**. For example, business methods or rules of games. And also more important, methods of treatment, diagnostics and surgery on the human or animal body can not be patented in Europe.

What are the requirements to get a patent?

For an invention to be patented, it must usually be

- ✓ **new** to the world (i.e. not available to the public anywhere in the world)
- ✓ **inventive** (i.e. not an "obvious" solution), and
- ✓ susceptible of industrial application

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What a the **requirements** to get a patent for your invention?

1. It must be **new** to the world. This **means** not available to the public anywhere in the world before the **date of filing** the **patent application**.

2. It must be **inventive**. “Inventive step” is quite **difficult to assess**. To assess the inventive step, the European Patent Office **compares** it with what would have been **obvious** to a **person skilled at the art** at the **time of filling**.

3. And the **third requirement**, it must be **usable** for industrial applications.

Do's and don'ts for safeguarding novelty

Don's

> Do not publish any articles, press releases, conference presentations/ posters/ proceedings, lectures or blog posts, etc. before you file

> Do not sell any products incorporating the invention before you file

Do's

> Sign a non-disclosure agreement (NDA)
contact the responsible person at the Technology Transfer department

> Seek professional advice at an early stage

> File before anyone else does!

Once you have filed your application, you are free to present, publish or sell your invention as you wish.

DESY. This slide is a modified version of a slide from the Intellectual Property Teaching Kit from the EPO. 21

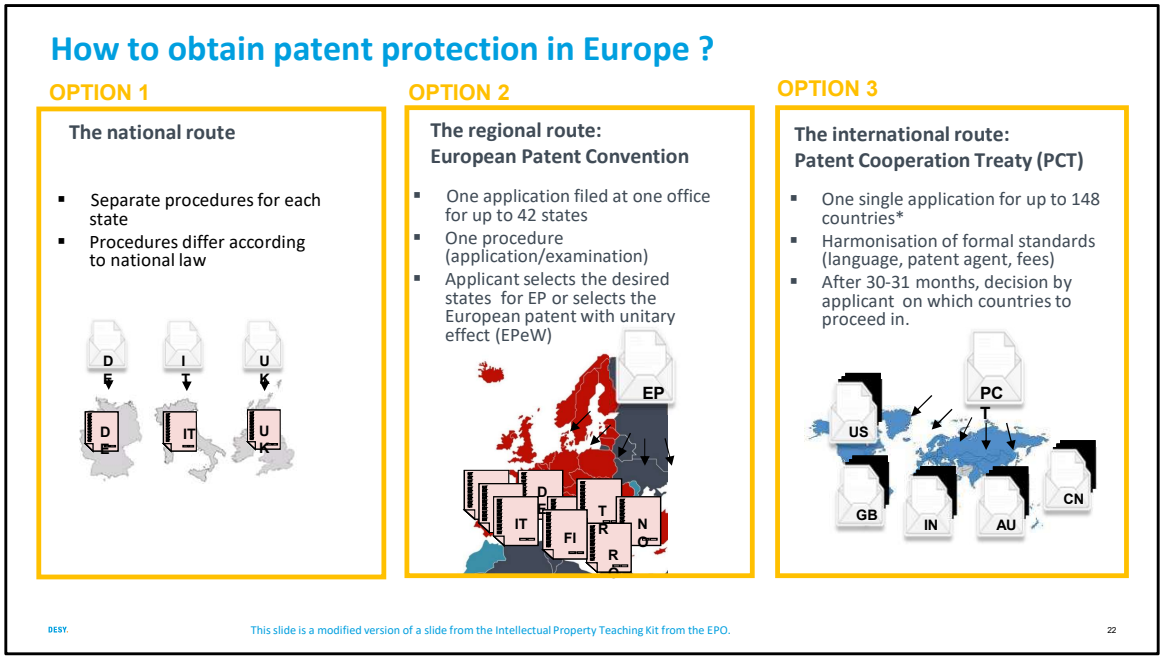
Now we come to the Do's and Don'ts for **safeguarding novelty**.

We start with the **Don'ts**:
1. Do not **publish** any articles, press releases, conference presentations/ posters/ proceedings, lectures or blog posts, etc. **before you file.**
2. Do not **sell** any products incorporating the invention before you file.

Then we come to the **Do's:**
1. **Contact** the responsible person at the Technology Transfer department to sign a non-disclosure agreement (**NDA**). Contact us, we are happy to help you.
2. The **next advice** goes in the same direction: Seek **professional advice** at an early stage. **Contact us**, if necessary we will contact a patent attorney at an early stage.

Important here to know is "Once you have filed your application, you are free to present, publish or sell your invention as you wish."

Take home message here" File first, then publish".



Now we come to the **question**: How to obtain a **patent protection** in Europe ?

There are **three options** for this.

Option 1: The **national route.** This option may **be the best**, if you are seeking protection in only a **few countries**. Drawbacks are: You have separate procedures for each state and procedures differ according to national law in each state. At DESY, we only choose this option if we only want a German patent.

Option 2: The **regional route.** This route is via the European Patent Office under the **European Patent Convention**. The **European patent system** was set up to **harmonise and streamline** the **patent granting process** in Europe.

1. You file **one application** at one office for up to 42 states and there is just one procedure for application and examination
2. Once the application is granted, the applicant selects the desired states, in which of the **42 countries** the IPR should be validated or selects the European patent with unitary effect- that's new. For this, he has to perform certain **acts** such as **paying fees** or **translating the patent document**.
3. **Applications** can be filed at the EPO in **any language**. However, the official languages of the EPO are English, French and German. If the application is not filed in one of these languages, a translation has to be submitted.

Option 3: The **international route:** A third path for getting a patent protection in Europe, is **going by** the **Patent Cooperation Treaty or PCT**.

1. The PCT allows to apply with one single application for up to **148 countries**. So, not just in Europe but **worldwide**.
2. PCT applications do not lead to "**international"** patents. Instead, they branch into national patent

applications.

3. The applicant gets a **search report** and an **opinion on the patentability** of his invention, and has up to 30 months to decide in which countries he wants to proceed with his patent application.

01 Welcome and introduction by Jayesh Wagh

02 Innovation and Technology Transfer at DESY

03 What is Intellectual Property (IP)?

04 What is a patent ?

05 Use, transfer and exploitation of research software - Speaker: Dr. Janine Fischer

06 Wrap up, final messages and questions

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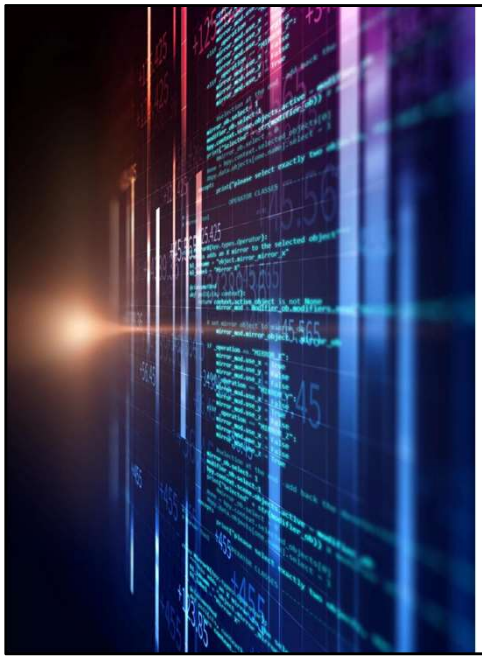


Use, transfer and exploitation of research software

Scientific software = **valuable ressource**

SoftWert Project
2020 – 2023
BMBF funded
Solutions and Tools for **Software Exploitation**

www.softwert.org

My topic is the use, transfer and exploitation of research software.

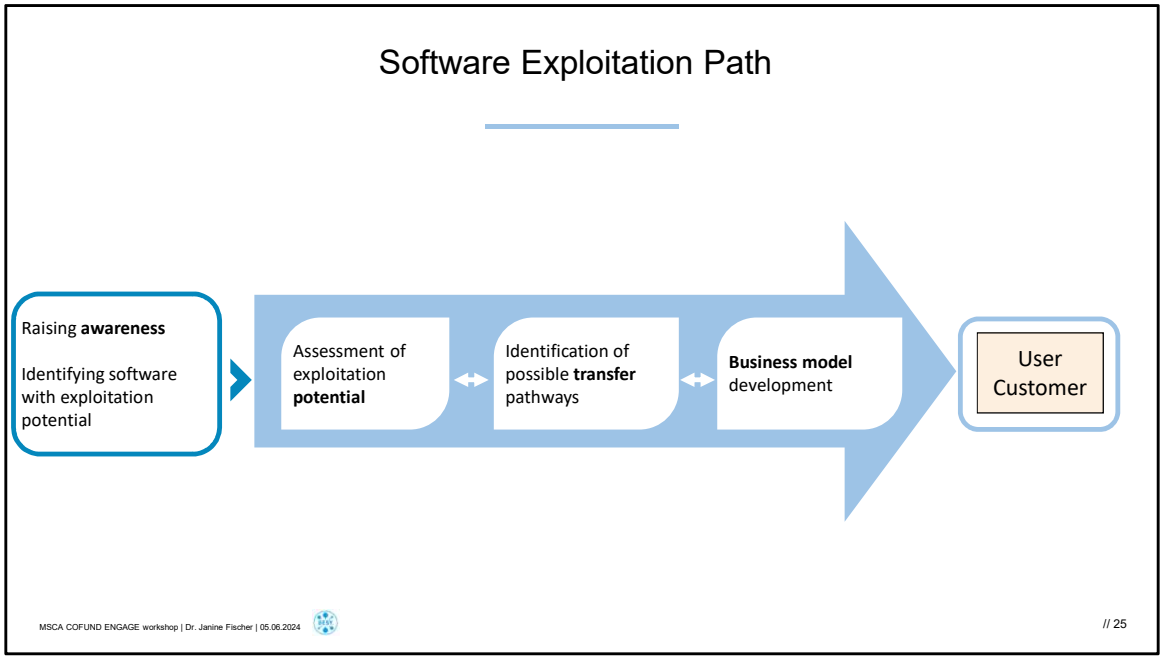
Software is a very valuable resource.

The transfer, exploitation as well as sustainable reuse and application of research software can create
- revenews,
- impact for the instution & the researchers, as well as
- networks and collaborations to transfer the software and
- knowhow transfer into application in industry and society.

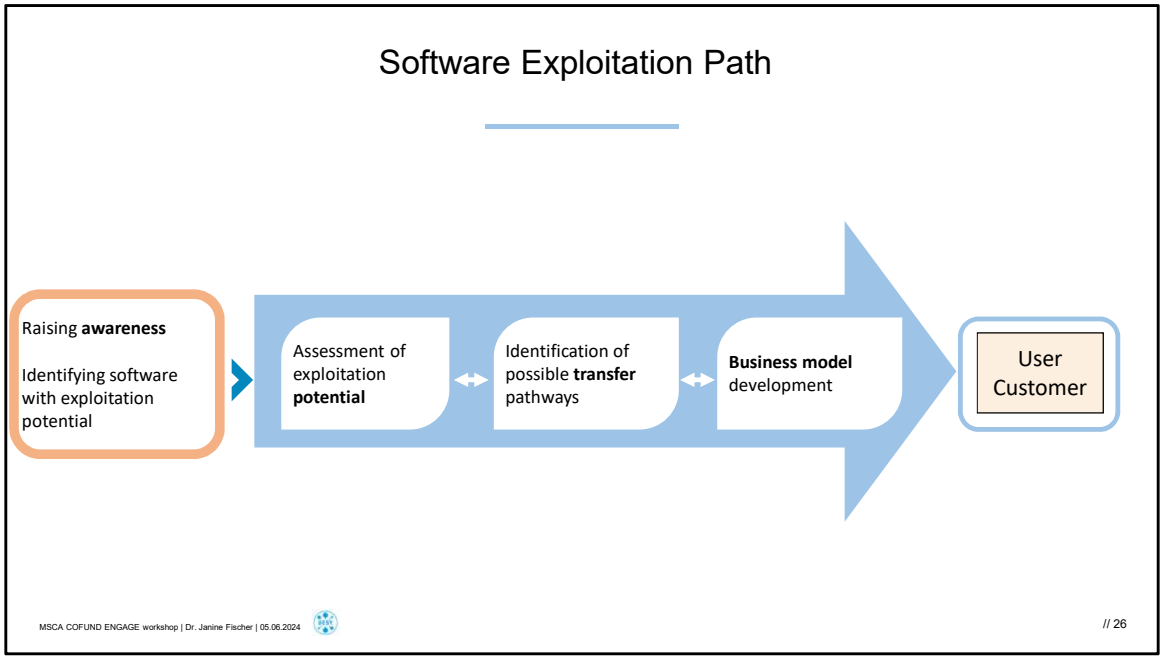
In 2020 there was still a lack of exploitation tools for research institutions.

Therefore the German Ministry of Education&Research financed the Joined Project „SoftWert“ in order to develop and validate suitable exploitation tools for research institutions. 3 Helmholtz research centers and a university were part of this project which was lead by DESY.

Results of this project can be found in more detail under www.softwert.org and I will cover the basics of this pool of knowledge in my talk.

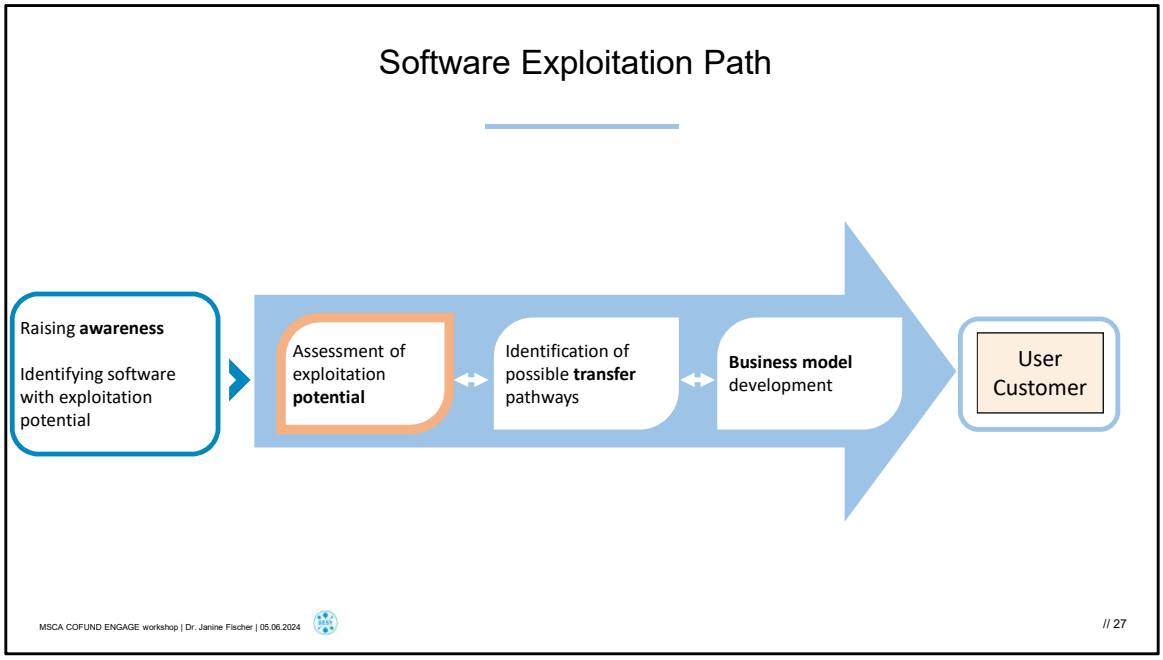


The path of software exploitation covers the whole process from identifying research software with exploitation potential to the final transfer of the software and its application outside the own institution

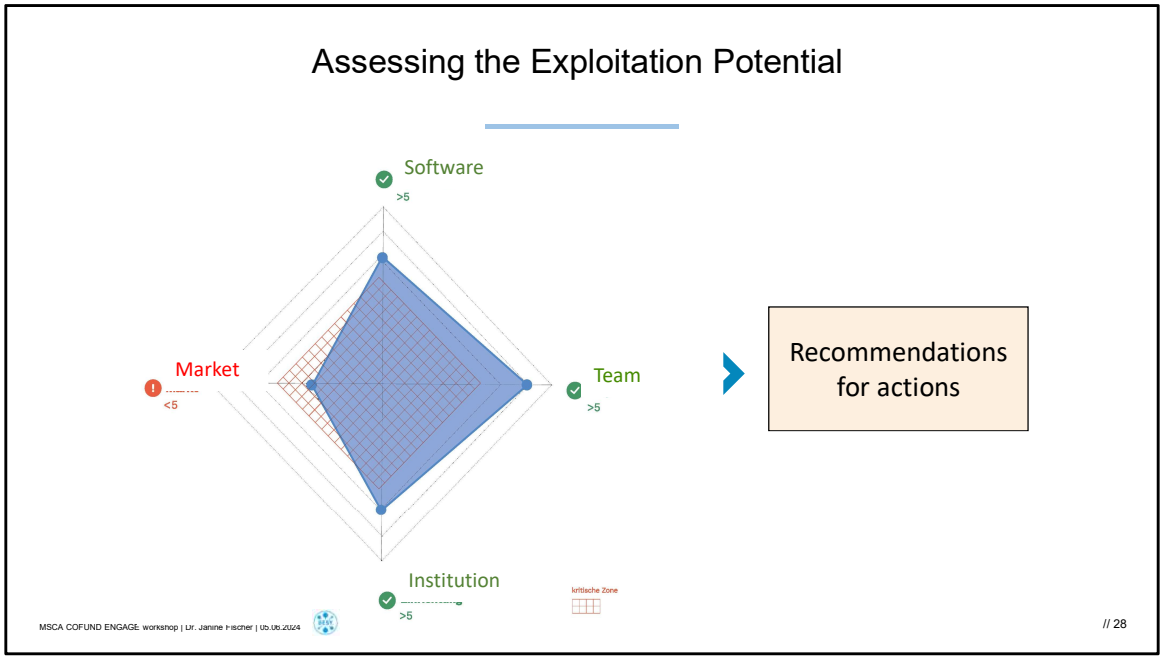


The first very important step is to raise awareness that research software is very valuable and can have the potential to solve many challenges in society. Furthermore the benefits for the researchers and their research, from creating impact, collaborations, getting funding opportunities. Revenews coming from exploitation for example at DESY go into an innovation fond that is used to financially support innovative research projects at DESY to become products and go into application or the basis for founding a spin-off/start-up.

A software declaration process, screenings, workshops and personal contact to the researchers and software developers is used to identify research software with exploitation potential



In the next step this exploitation potential needs to be assessed to evaluate how much effort and ressources should be invested into creating a transferable software or exploitable product.



Within the SoftWert project we developed a tool that assessed the exploitation potential of a software and gives recommendations for actions. This tool can be used for software with commercial potential but also for open source software.

4 areas are analysed.

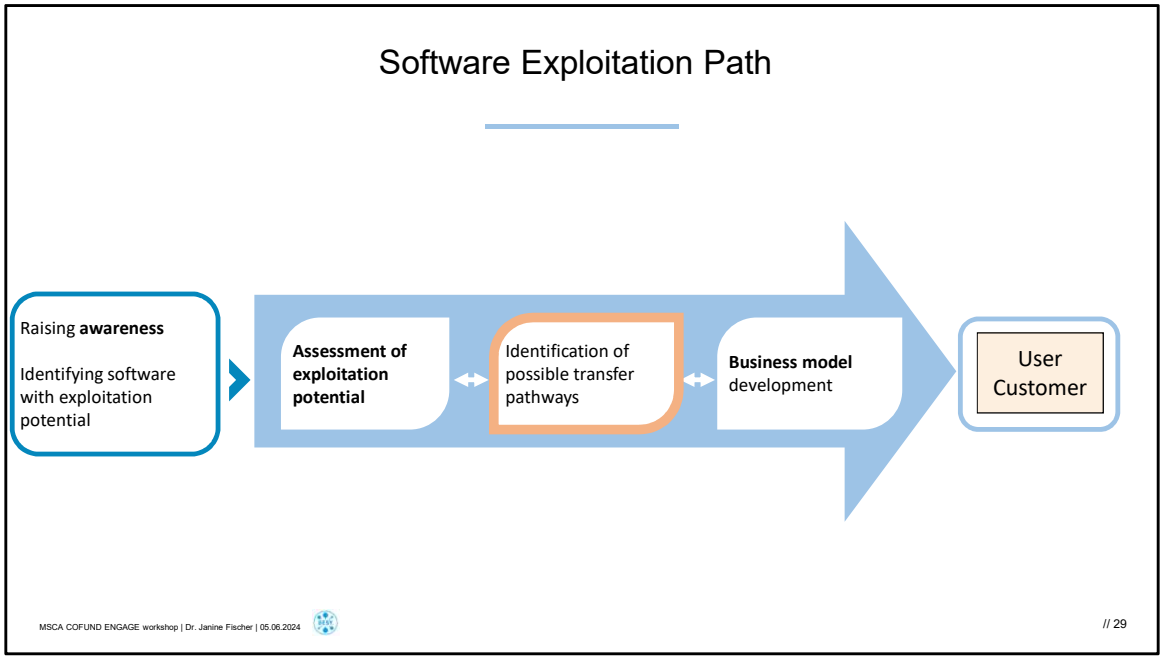
First the software itself. How is the quality of the software? Is a documentation or manual already available? How user-friedly is the software

Next the team. Is the team motivated to develop a transferable code or a software product? Will this team be available in the future in order to provide support, consulting or maintanance?

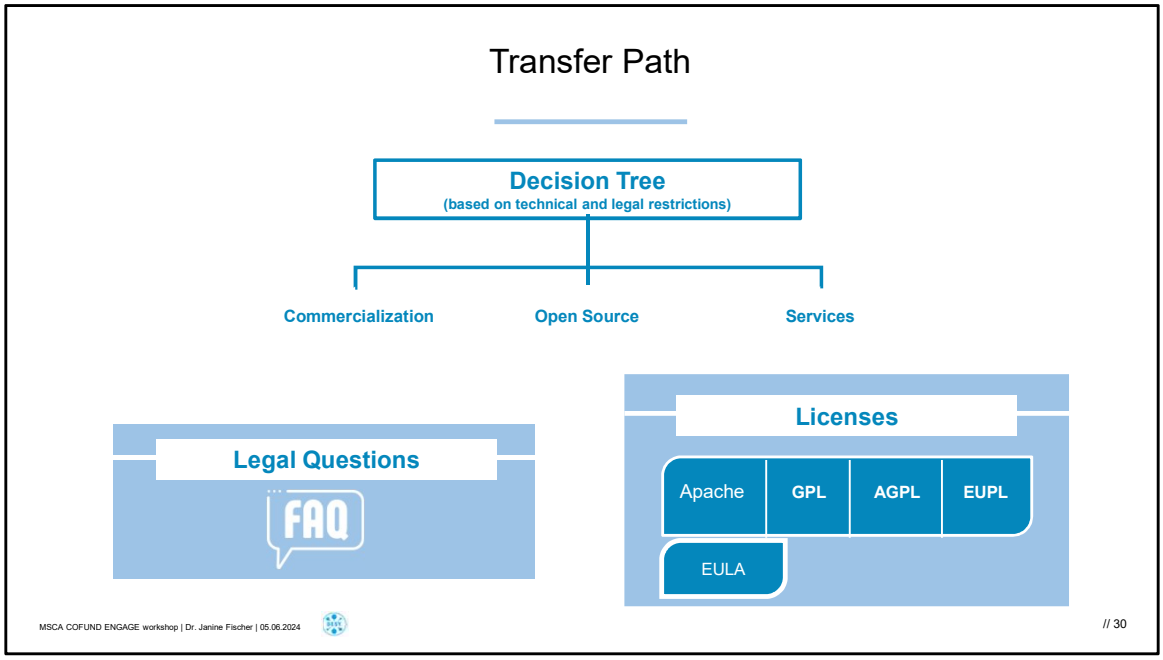
The institution should also be onboard. Is the research institution interested in exploitation of software? Which transfer path (like Open source publication, industry collaboration or commercial licensing) are favored and supported?

Last but not least the market interest for the software. Who ist interested in the software? How broad is the the application potential (different markets)? Are there already contacts to and interest in the software/knowhow from industry partners or other organizations?

Answering questions in all of these 4 areas in the tool will give recommendations for action depending on the exploitation potential.

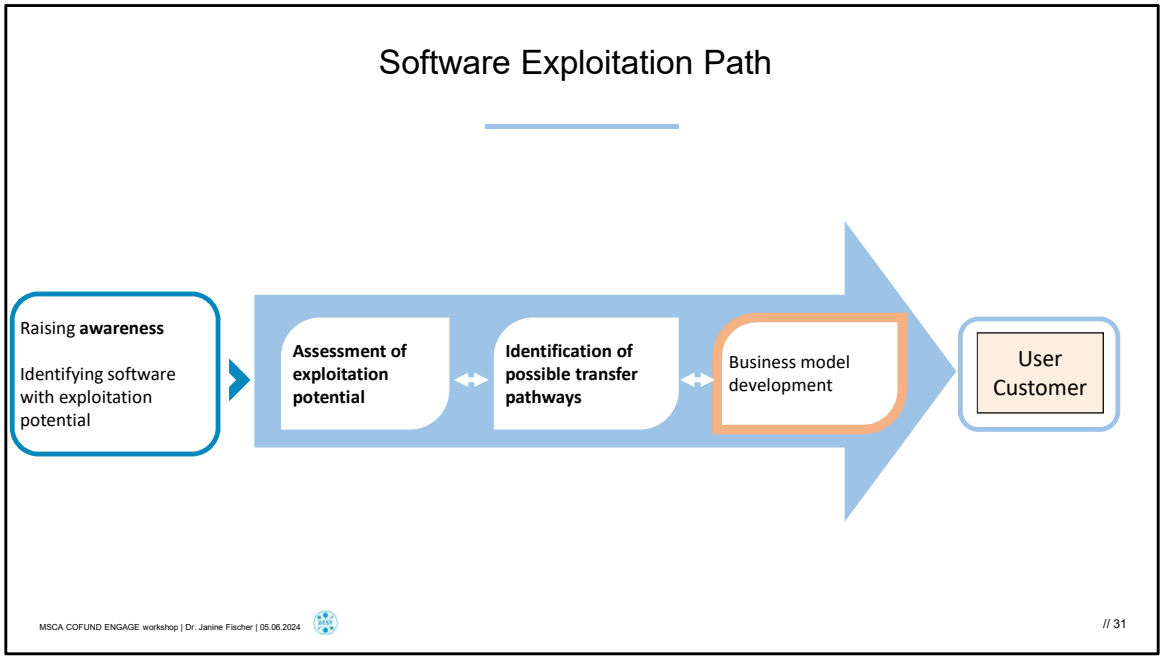


A very crucial step is the identification of possible transfer pathways that can be used to exploit the software

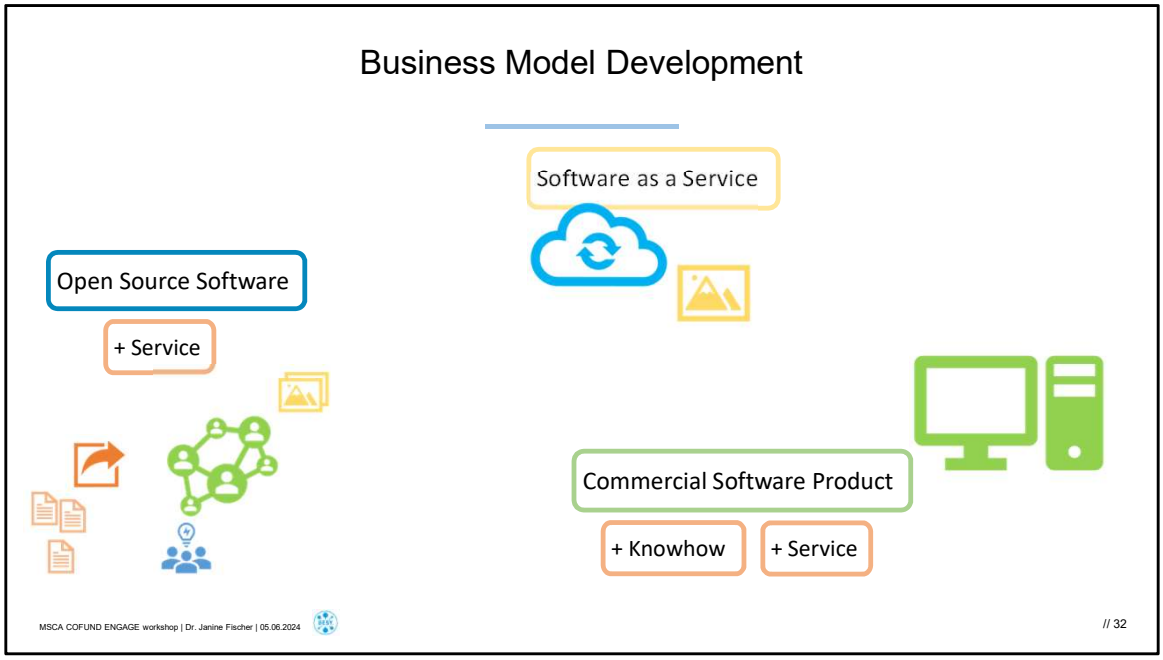


Software can be exploited in many ways like open source publication, commercial licensing or providing service&consulting.

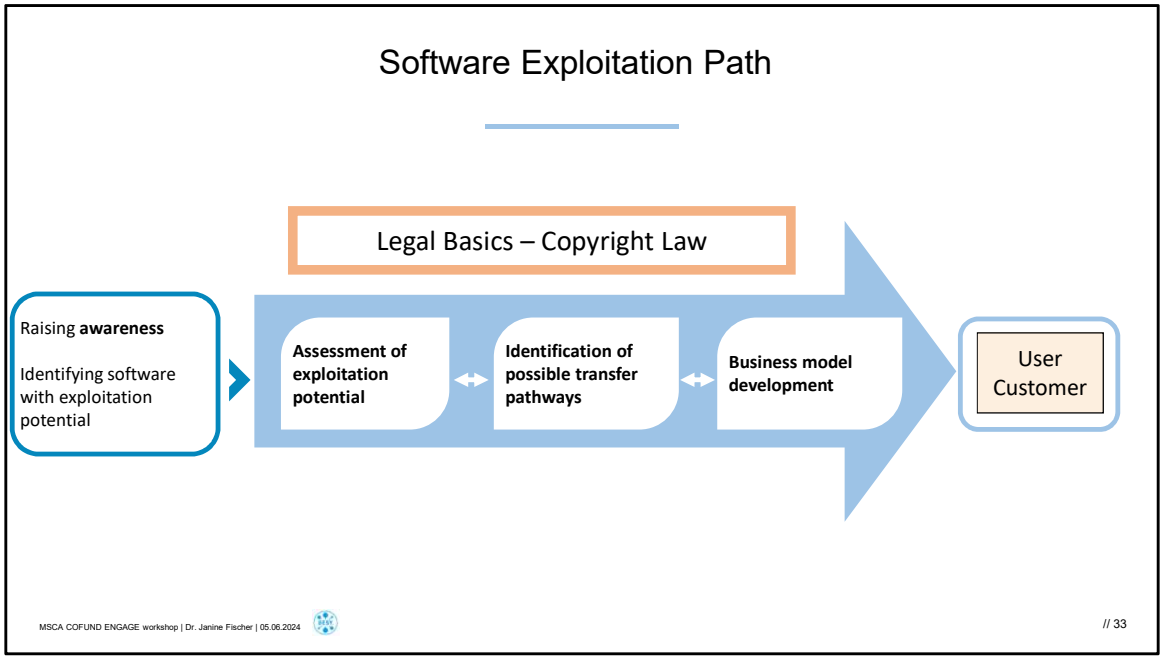
The decision for a suitable pathway is based on technical and legal restrictions which allow and forbid certain transfer pathways. I will talk about this part a bit more deeply in the next part of my talk. To identify all the possible transfer opportunities a lot of legal questions and details have to be addressed and answered. Furthermore a basic knowledge about licensing is beneficial.



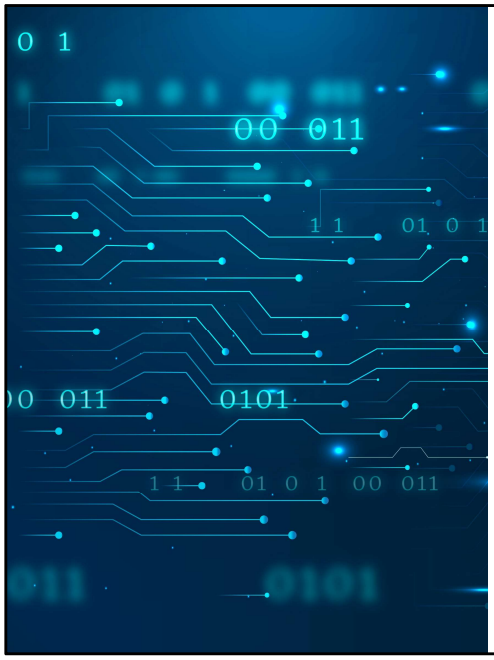
The different transfer pathways can be selected and also be combined to create different business models via which the software is then transferred to the user or customer.



Open Source Software publication can for example be combined with a service offer. Software can be utilized via a commercial software license with additional knowhow or services attached. And last but not least a Software as a Service can be provided to the customer where the user is accessing the software via the cloud and thereby no software code or confidential knowhow needs to be tranferred.



As mentioned before, I would like to talk in more detail about the legal basics of software exploitation which are covered by the Copyright law



Legal Basics

- Copyright Law
- Relevance of a License
- Proprietary versus Open Source License
- FOSS License
- EULA License

German Copyright Law

Software (source code) is a written asset

- Copyright protection (Copyright Law)
  - ➢ automatically granted upon creation of the work

Protected by copyright:

- **Source code**, object code, documentation, preliminary works
- **human**-created works

Not protected by copyright:

- **Ideas** and concepts for software
- GUIs (Graphical User Interface)
- Works created by algorithms or **AI**s

- All developers who **actively contributed to the code** are authors
- Copyrights (Moral Rights) cannot be transferred, deleted, or sold (German law)
- Expires 70 years after the death of the last author

I will talk about the German copyright law. Be aware that the laws may be different in your country – this is to my knowledge especially the case for the US and the UK.

Software code is similar to a book that you could write protected by copyright law. This protection is automatically granted just by writing the code.

Usage and exploitation rights

Collaborative software creation:

- All authors have the exclusive usage and exploitation rights
- **All authors must agree** on exploitation strategies collectively
- Authors can waive their exploitation rights or transfer them

Software creation within an employment or service contract:

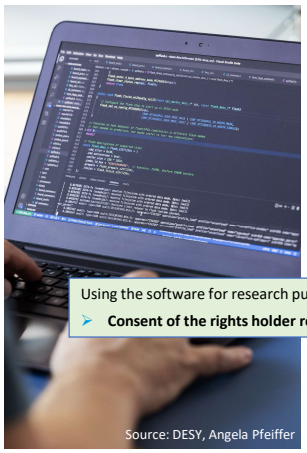
- The exclusive usage and exploitation rights **belong to the employer**
- For freelance workers, these rights remain with the author unless otherwise specified in the contract

If a software is developed by different authors, all authors together hold the usage and exploitation rights. Therefore all authors must agree together on the exploitation strategy and for example the license type. These rights can be transferred to others.

In case the software was developed within an employment contract, the exploitation rights belong to the employer.

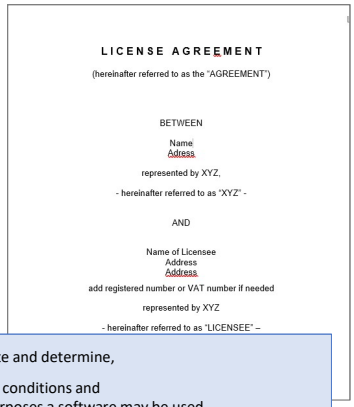
This is critical if there are different authors. It has to be identified for each author if they provided code under an employment contract. It is beneficial to document the names of all authors and their employers from the time when they added code to the software to be able to find out who (different software developers, different employers) is allowed to decide on the exploitation strategy and license type

Relevance of a license



Using the software for research purposes or other applications

- **Consent of the rights holder required**



LICENSE AGREEMENT

(hereinafter referred to as the "AGREEMENT")

BETWEEN

Name
Adress

represented by XYZ,

- hereinafter referred to as "XYZ" -

AND

Name of Licensee
Address
Address

add registered number or VAT number if needed

represented by XYZ

- hereinafter referred to as "LICENSEE" –

Licenses regulate and determine,

- under what conditions and
- for what purposes a software may be used

- **Terms of use**

If you as a user want to use a software it is critical to get consent of the rights holder.

These user rights can be regulated and determined via a license

The licensor can determine for what purposes and under which conditions the software may be used. And the user (licensee) knows what he is allowed to do and not with the software. So both sides are legally covered.

Determine further usage through licenses

- Especially relevant,
  - when the software is not only **used in-house**
  - but also **copied,**
  - **modified,**
  - **distributed externally**
  - or **used commercially**
- Licenses can allow or restrict all these activities
- For academic in-house use, a license is helpful

  → but when **distributing to third parties**, a license is useful and necessary

- Licenses:
  - **Create them yourself** or
  - choose from existing templates (e.g., "Free Open Source Software" (**FOSS) licenses**

If you use a software in-house, you may be quit save. But anyhow always check the license situation to be on the safe side. Especially with commercial software.

But in case software is distributed externally (also non-commercially) or used commercially, licenses are crucial.

Licenses can allow and restrict all activities (Copy, Modify, Distribute, Use Commercially). Whenever software is distributed to third parties, a license should be attached or negotiated.

Your can create these license texts yourself or you can choose existing templates like FOSS licenses

Open Source versus Proprietary Licenses

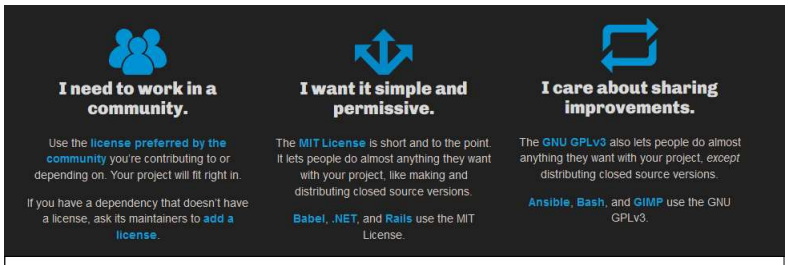
Free Open Source Software (FOSS) License	Proprietary License (End User License Agreement)
• Similar to **terms of service agreements**, • **standardized** like Creative Commons licenses, • no modifications allowed to the license text	**Individually** created license text / license agreements
The licensee may: 1. **View** the source code 2. **Use/apply** it 3. **Modify** it 4. **Distribute** it	• All usage conditions for the software and source code can be individually formulated and specified in the license text • The source code can, but does not have to be disclosed
Usage of the software doesn't have to be free of charge	Usage of the software does not have to incur a cost

To elaborate on this topic a bit deeper, I want to show you the differences between the Free Open Source Software Licenses (FOSS Licenses) and Proprietary Licenses (End User License Agreement - EULA)

Free Open Source Software (FOSS) Licenses

Over 100 licenses are listed on the Open Source Initiative website (https://opensource.org/licenses)

Choosing the license based on one's own goals or mission



A helpful website for choosing an open-source license and a brief overview of the conditions

Source: https://choosealicense.com/

There are over 100 licenses listed on the Open Source Initiative website.

You can choose a license based on your own goals or mission. A helpful website is www.choosealicense.com

Open Source Licenses

- Originally intended to **assist** developers in sharing their software with third parties or making it available to the public **without deep legal expertise** (similar to CC-BY)
- However, open source licensing is **not trivial**

Licensor	**User (Licensee)**
➢ Selecting a license based on the **rights** that are **mandated** (e.g., copyleft) and/or should be **granted** for the distribution of the software	➢ Understanding how the **source code can be used**, connected with other code, and distributed (compatibilities, copyleft, attribution, documentation of changes)

Quelle: www.softwert.org

Open Source licenses were originally developed in order to assist software developers to share their software with third parties under their conditions without the need of any deeper legal expertise.

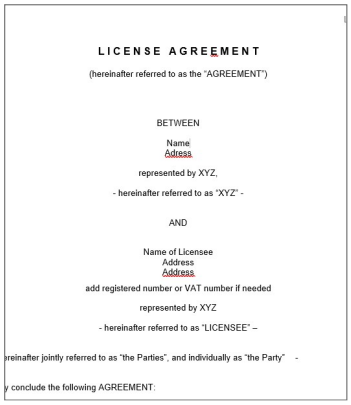
However, Open Source licensing is not trivial.

The licensor needs to select a suitable license based on the rights that should be granted. This includes knowhow about copyright, copyleft and compatibility of different license types

The licensee on the other side also needs to have an understanding of licenses, copyrights, compatibility issues, copyleft effects and requirements for documentation that can come with using the source code or software and may be demanded when using certain license types

License text – End User License Agreement (EULA)

- There are no guidelines/directives as to what should be included in a license text
- The license text should be formulated in such a way that it provides sufficient legal protection for both the licensor and the licensee



LICENSE AGREEMENT

(hereinafter referred to as the "AGREEMENT")

BETWEEN

Name
Adress

represented by XYZ,

- hereinafter referred to as "XYZ" -

AND

Name of Licensee
Address
Address

add registered number or VAT number if needed

represented by XYZ

- hereinafter referred to as "LICENSEE" –

reinafter jointly referred to as "the Parties", and individually as "the Party" -

y conclude the following AGREEMENT:

But writing ones own licence text or EULA is also not trivial.

There are no guideline as to what should be included.

Just that the license text should be formulated in such a way that it provides sufficient legal protection for both the licensor and the licensee

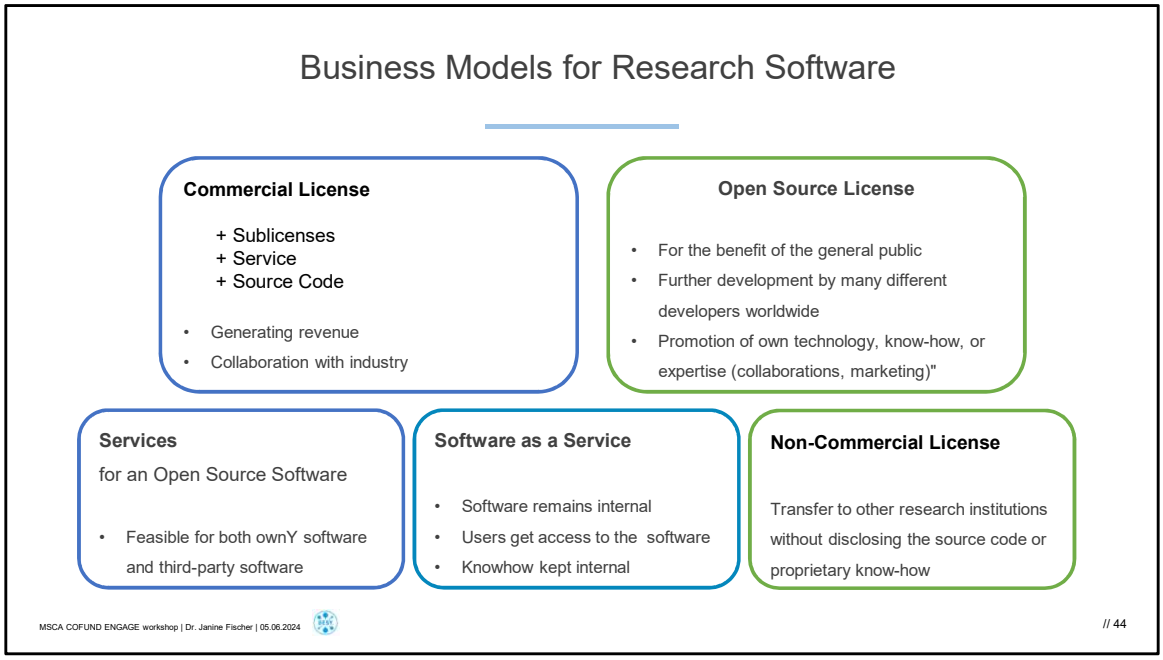
License text – End User License Agreement (EULA)

Potential contract points in a license agreement:

- Usage, Modification, Distribution (Sub-licensing)
- With source code or only executable software
- Confidentiality clauses
- Costs
- Liability
- Tax clauses
- Export control
- Jurisdiction and e.g. German law

Potential contract points that I cover in my license agreements are

- Confidentiality clauses,
- costs,
- liability,
- tax and
- export control clauses
- if source code is provided or only executable software
- as well as the permission or prohibition of giving the software further, called sublicensing.



Research software can be exploited via 5 different business models.

First via Open Source Licensing

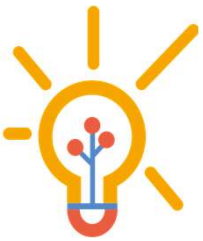
If the source code should remain confidential a non-commercial license is suitable. Open Source licenses cannot be used for this because they literally stand for the disclosure of the code – it should be freely available. So a proprietary EULA License needs to be prepared for the non-commercial license model

To create revenew a commercial license needs to be prepared. This model can be expanded with the addition of sublicense allowance, access to the source code, services and consultation

Combination of Exploitation Strategies

Open source does not exclude commercial use

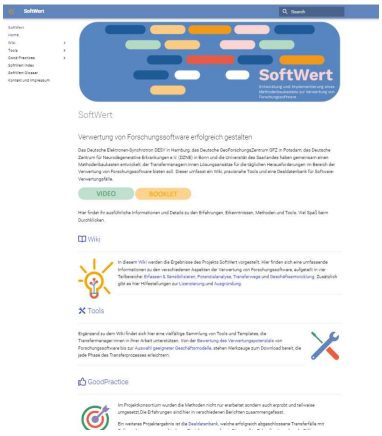
- **Combination of license types**
  - **Open Source License + Commercial License**
  - **Different Open Source Licenses for the same software**
- **+ Services**
- **+ Consulting**
- **SaaS**
- **Knowledge Transfer**



Be creative and innovative

Further information

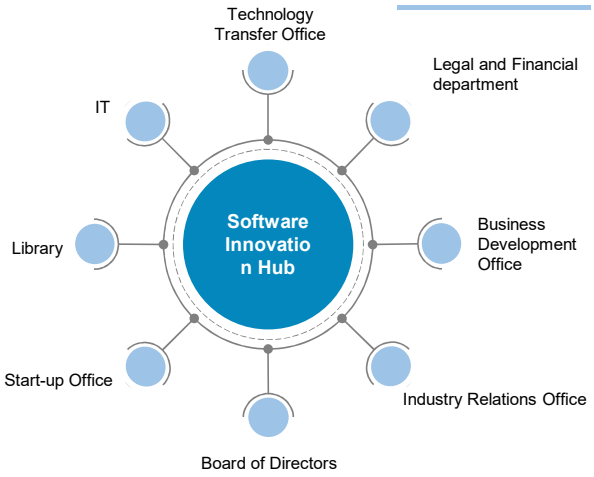
Booklet



Wiki

softwert.org

Software Innovation Hub (SIH)



Project lead and contact:
Dr. Janine Fischer (ITT)

- **Central point of contact** for research software with transfer and exploitation potential (intern and external)
- Integrated into the DESY innovation and technology transfer ecosystem

01 Welcome and introduction by Jayesh Wagh

02 Innovation and Technology Transfer at DESY

03 What is Intellectual Property (IP)?

04 What is a patent ?

05 **Use, transfer and exploitation of research software - Speaker: Dr. Janine Fischer**

06 Wrap up, final messages and questions

Take Home Messages

Trade marks
- NOKIA
- Product "208"
- Start-up tone

Copyright
- Software
- User manuals
- Ringtones
- Start-up tone
- Images

Patents and utility models
- Data-processing methods
- Operating system
- Operation of user interface

Designs
- Form of overall phone
- Arrangement and shape of buttons
- Position and shape of screen

Trade secrets
- Some technical know-how kept "in-house" and not published

One product - many IP rights

This slide is a modified version of a slide from the Intellectual Property Teaching Kit from the EPO.

THANK YOU FOR YOUR ATTENTION

ENGAGE project is partly funded by the European Union's Horizon 2020 Research and Innovation Programme under the Marie Sklodowska-Curie COFUND scheme with grant agreement No. 101034267.

INNOVATION & TECHNOLOGIE TRANSFER

Copyright notice in code headers

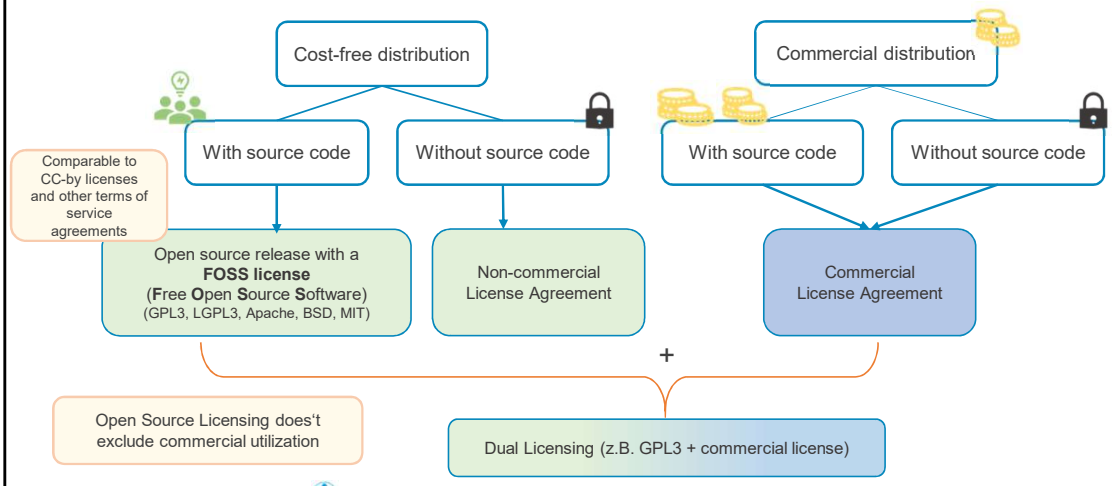
```
<one line to give the program's name and a brief idea of what it does.>
Copyright (C) <year> Deutsches Elektronensynchrotron DESY
- <name of author>, <name of employer> <year>
- <name of author>, <name of employer> <year>
- ...
// SPDX-License-Identifier: Apache-2.0
Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

 http://www.apache.org/licenses/LICENSE-2.0

 Unless required by applicable law or agreed to in writing, software
 distributed under the License is distributed on an "AS IS" BASIS,
 WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
 See the License for the specific language governing permissions and
 limitations under the License.
```

https://spdx.dev/learn/handling-license-info/

Business models for research software



Free Open Source Software (FOSS) Licenses

- Open Source Licenses entail **different terms of use**
- Can be roughly divided into **three groups**:

Strong **Copyleft** Licenses (GPL 2.0, GPL 3.0, AGPL 3.0, EUPL 1.2)	Weak **Copyleft** Licenses (LGPL 2.1, LGPL 3.0, MPL 2.0)	Permissive Licenses (no **Copyleft**) (MIT, BSD-3, Apache 2.0)

Copyleft Effect

„Copyleft is a general method for making a program (or other work) ***free*** *(in the sense of freedom, not "zero price"), and requiring all modified and extended versions of the program to be* ***free as well****."*
(Quelle: www.gnu.org).

Applies to:

- **Distribution** of code with copyleft license (both unchanged and modified, extended code)
- **Integration** of code with copyleft license into one's own code and **distribution** of the entire work

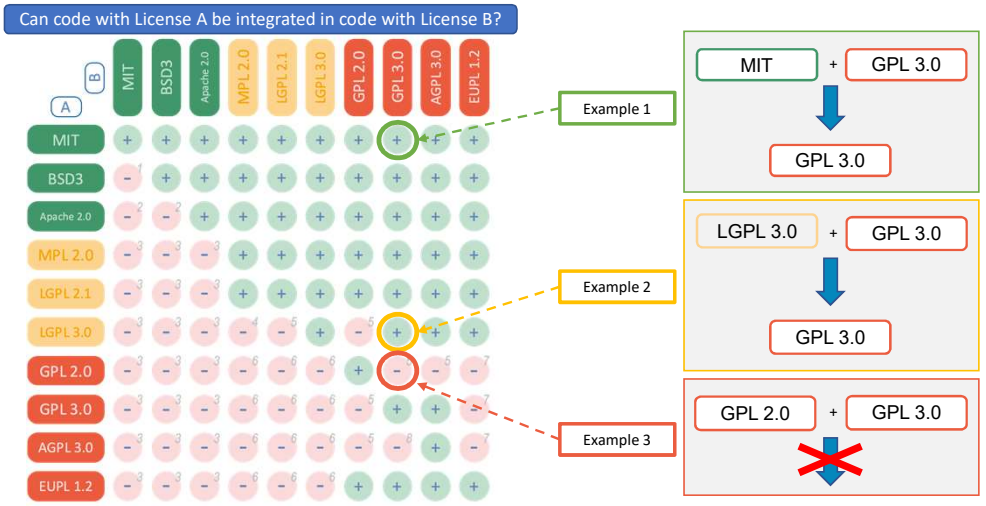
Copyleft Effect:

- **Copyleft-licensed code is integrated into one's own software package/code or statically linked**

  → **Distribution only under the same copyleft license**

  ➢ This is **critical** for companies and developers who do not want to place their own code/software under a copyleft license (as a result, they may have to publish their entire code, depending on the license)

Compatibility of Open Source Licenses



Source: www.softwert.org