ASTP 2022 Annual Survey

On the European Knowledge Transfer Landscape
Financial year 2020

Executive Data Report

| Survey overview

The 2022 Annual European survey
on Knowledge Transfer activities and outputs (FY2020 data)

ASTP is the pan-European association of Knowledge Transfer (KT) professionals with a core mission to share best practices and develop competencies among KT professionals. Part of this role involves undertaking an annual survey of KT activities which also allows us to create a better understanding of knowledge transfer resources, and activities.

We are pleased to present the Annual Survey Executive Data Report with the data provided by respondents for Financial Year (FY) 2020.

This report draws on data from 565 Knowledge Transfer Offices (KTOs) across 24 countries.

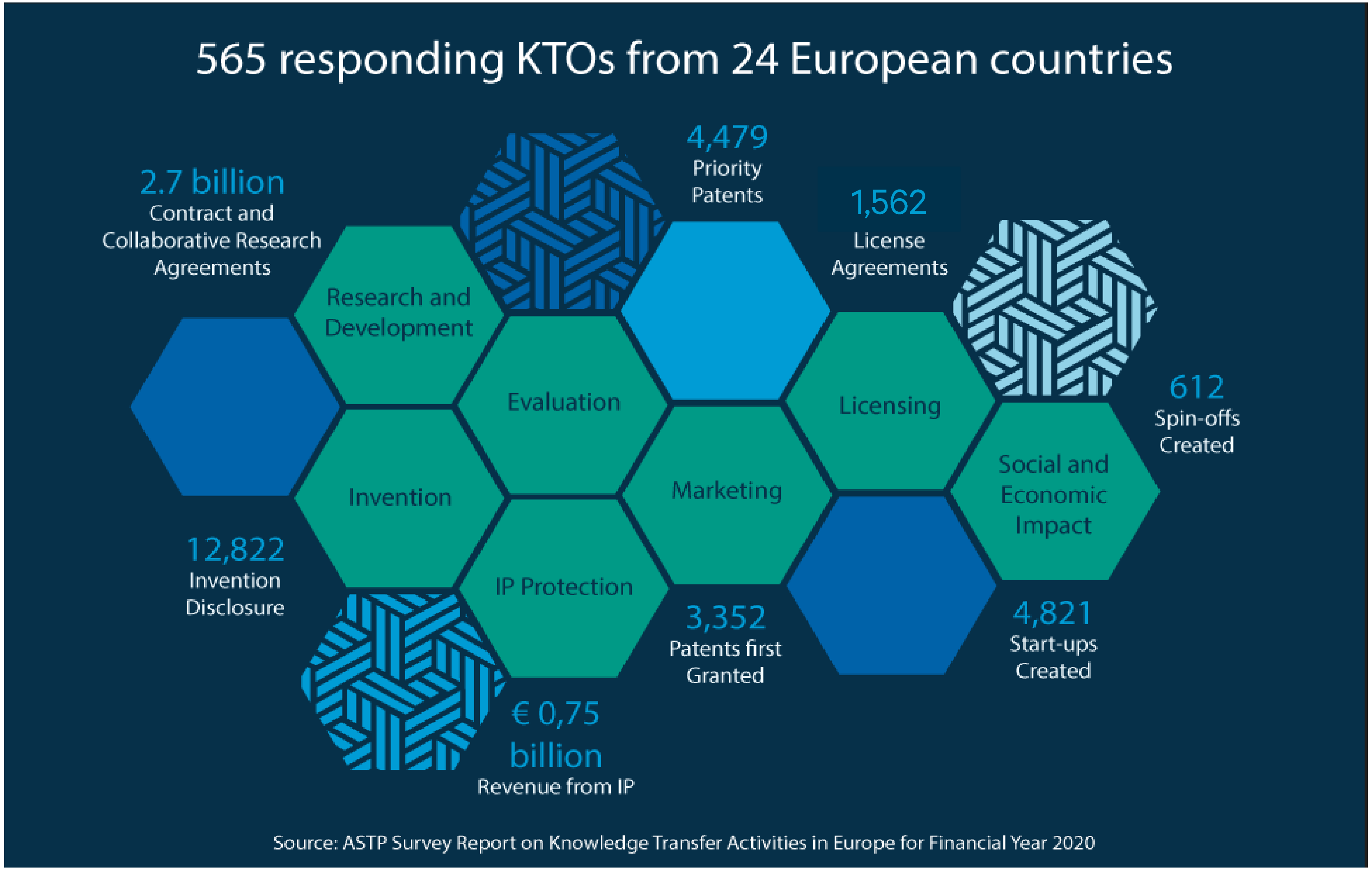
ASTP has been collecting and analysing data greatly supported by collaborating National Associations (NAs). In particular, we offer grateful thanks to the Danish Universities Denmark, French Réseau C.U.R.I.E, the German TransferAllianz, our colleagues from the Irish KTI, the Italian Association Netval, Spanish colleagues at RedOTRI, swiTT in Switzerland and UK Research England, for providing data from their national surveys.

The datasets originate from two kinds of sources :

- KTOs that participated in the ASTP FY2020 survey which was sent to ASTP KTO members as well as individual KTOs in the ASTP database, and open from January to March 2022.
- NAs provided data that they collected by running national surveys. Care was taken to only include data that was compatible with ASTP's survey questions and definitions.

This Executive data report presents the main results of the 2022 Survey. It covers the following sections:
- Survey sample and responding KTO profiles,
- Public Research Organisation served,
- Industry collaborations (agreements and income),
- IP management and commercialization (LOA agreements and revenue),
- Spin-off and start-up creation.

| 2022 Key figures in a nutshell



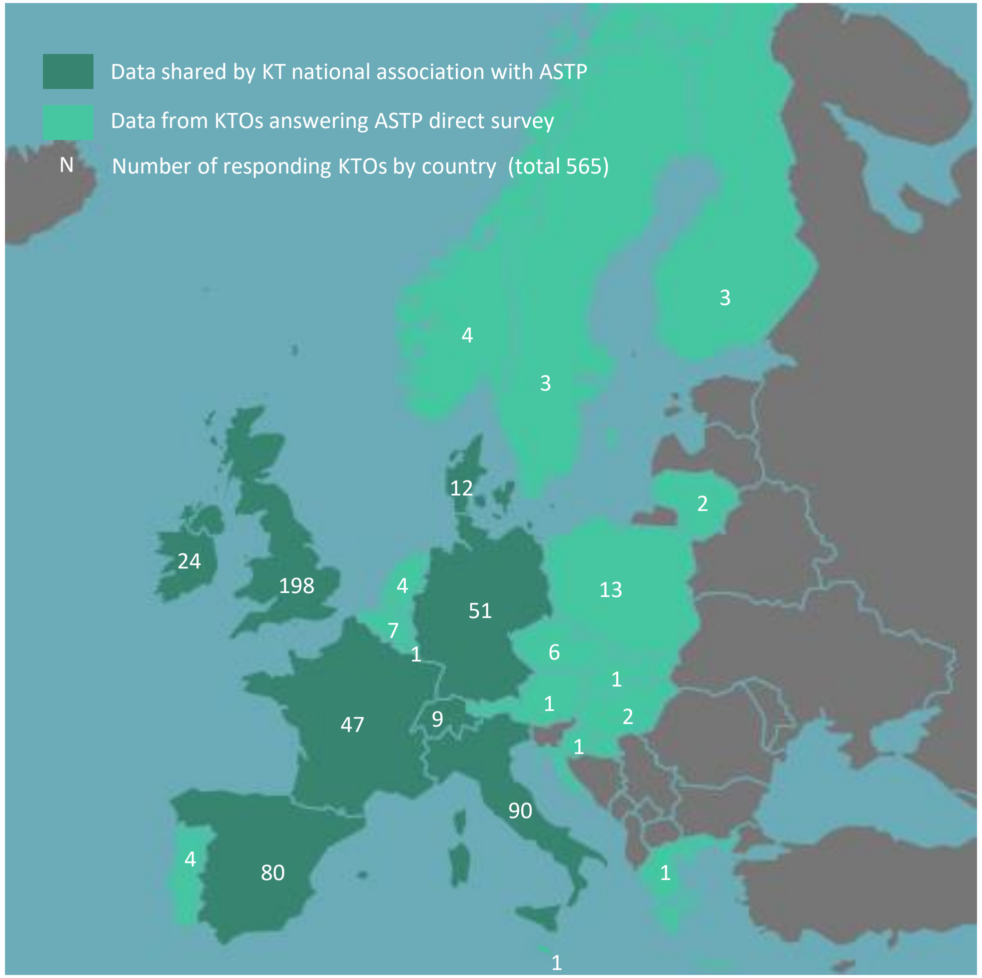
European Knowledge Transfer Landscape

ASTP 2022 Annual Survey | Executive Data Report

Information on responding KTOs

ASTP
A World of
Knowledge
Transfer

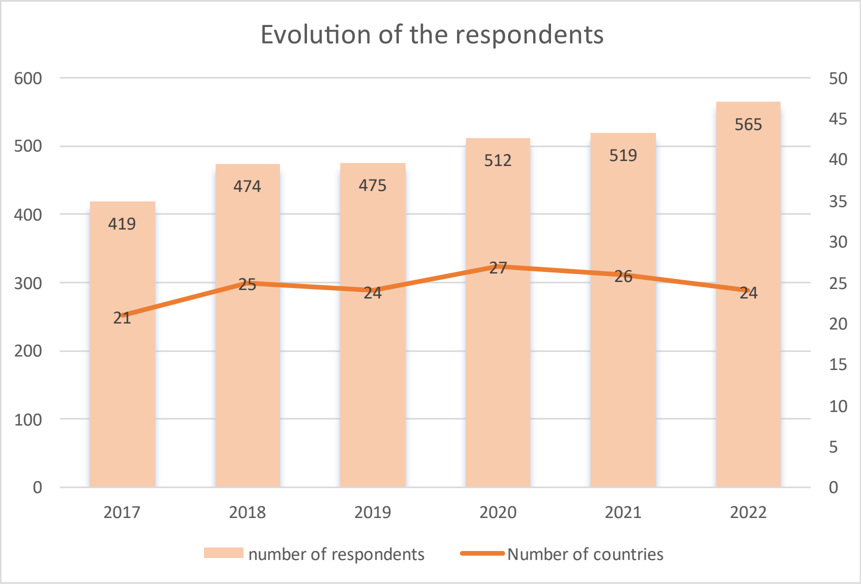
| 2022 Survey Sample



The consistent increase over the years in the total number of responses shows an appetite to be part of the KT metric landscape and its growing importance across Europe. Germany, Italy and UK had an increasing responding trend over the last years, with about 20 more respondents for FY2020 compared to FY2019.

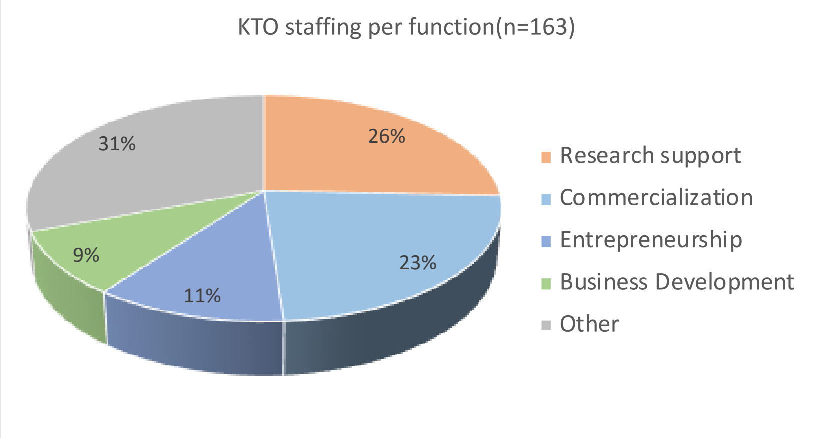
The variability of the number of countries is due to some KTOs being the only ones of their countries to take part in the survey but not on a regular basis. We note that 19 countries have regularly been responding over the last 6 years.

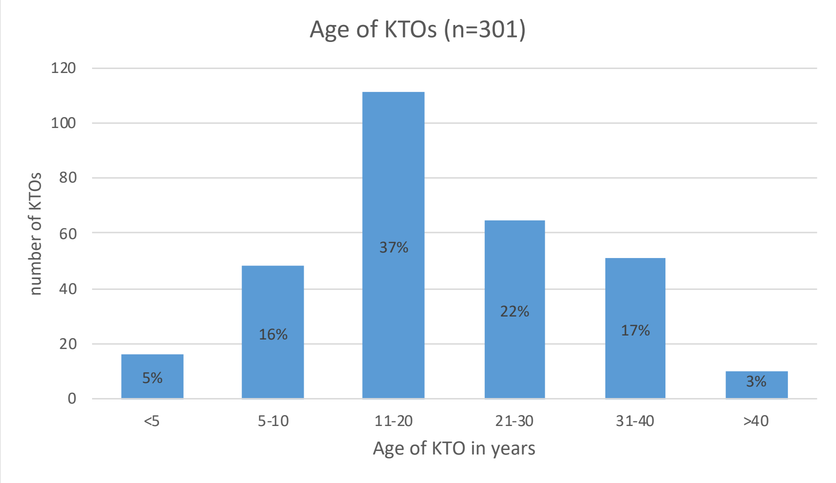
Data quality – A strict data cleaning protocol is conducted by the ASTP volunteers team, including when possible cross-checking with respondents when outliers are detected, for correction or confirmation. In empirical databases, values for variables may be missing because of non-availability, confidentiality or incompatibility of data. The total number of respondents for each question (indicated with ‘n’) varies and is indicated for each graph.

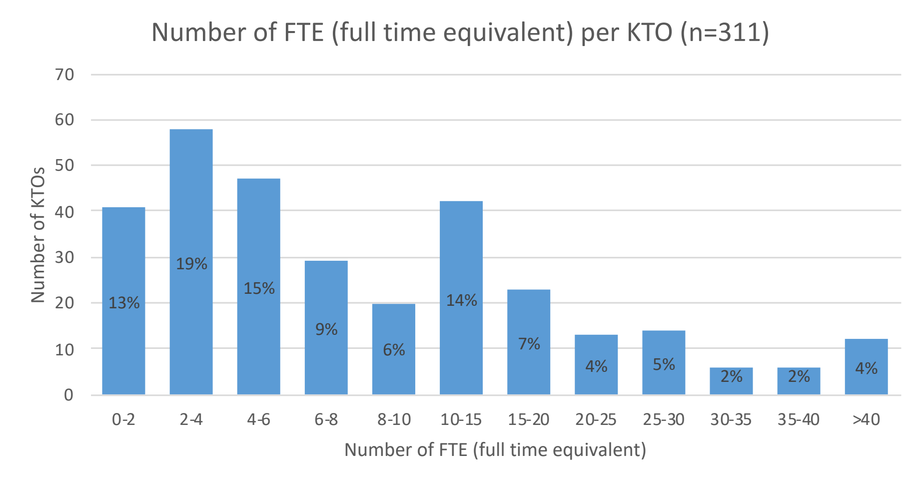


| Profile of Knowledge Transfer Offices

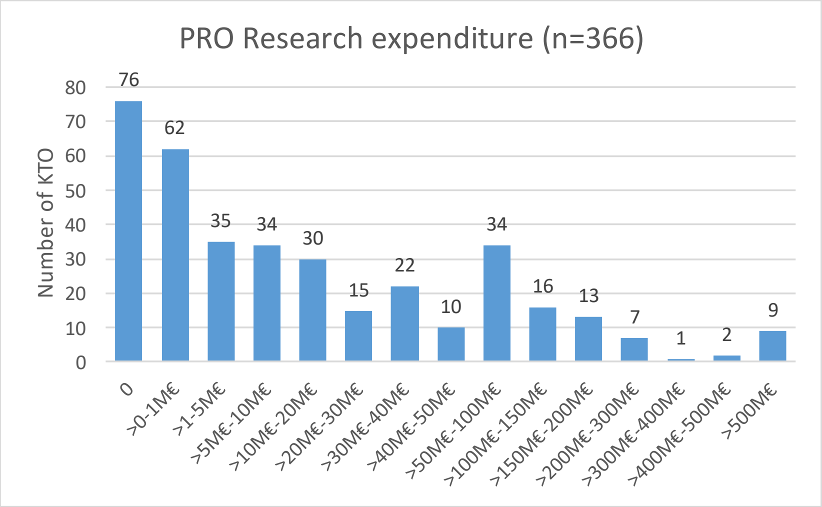
The three graphs in this section are reflecting the European heterogeneous landscape of KTOs. One-fifth of responding KTOs are less than 10 years old, while one-fifth are over 30 years old. The same diversity exists in terms of the size of KTOs' team. The maturity of processes and culture within their respective PRO (Public research organization) will probably lead to different level of results and outputs.
The pie chart shows the allocation of FTE among the different functions of the KTOs. 60% of KTO staff are dedicated to research support, commercialization, and entrepreneurship.

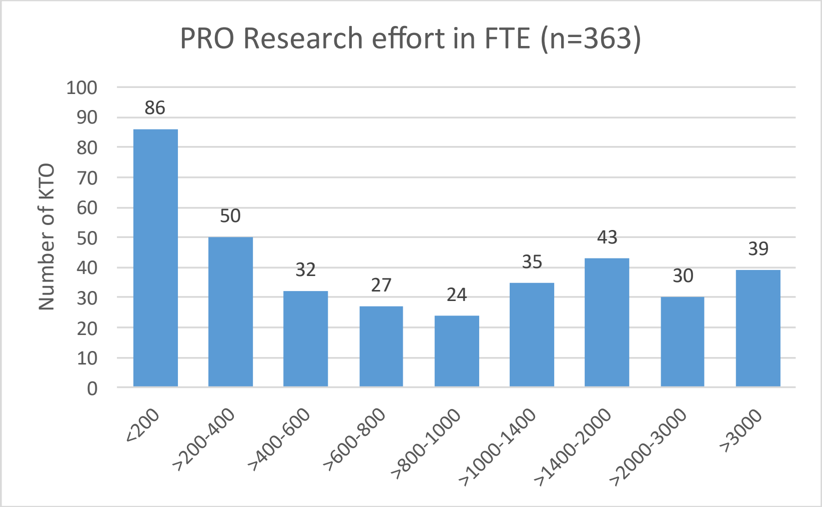






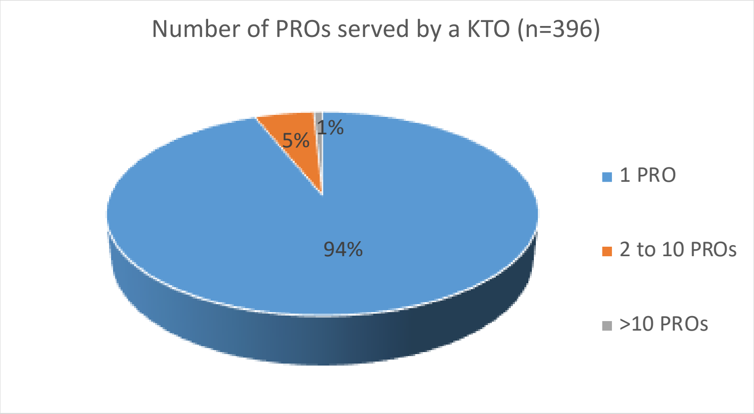
| Public Research Organisations served





As shown on the pie chart, most KTOs serve a single PRO. Only a minority of 1% operate on behalf of 10 or more research institutions .

In order to normalize for organization size and perform some analysis on the metrics, we asked KTOs to provide two metrics for the PROs that they serve: the PRO Research Expenditure and the PRO Research Effort expressed in FTE (including the cumulated data provided by KTOs which serve several PROs). The distributions on both metrics are quite similar over the years.



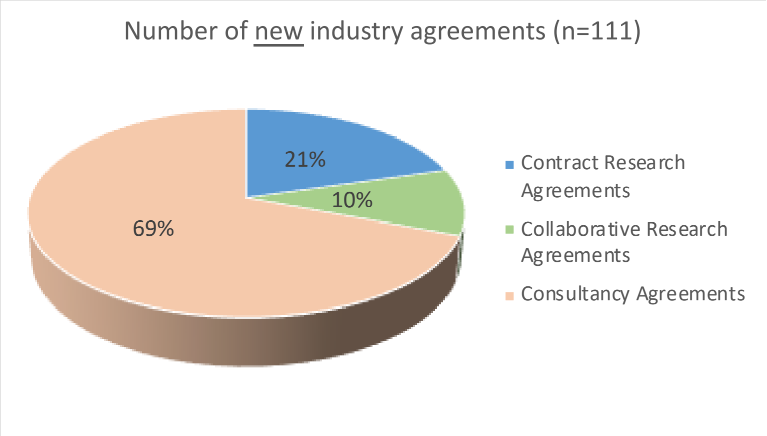
European Knowledge Transfer Landscape

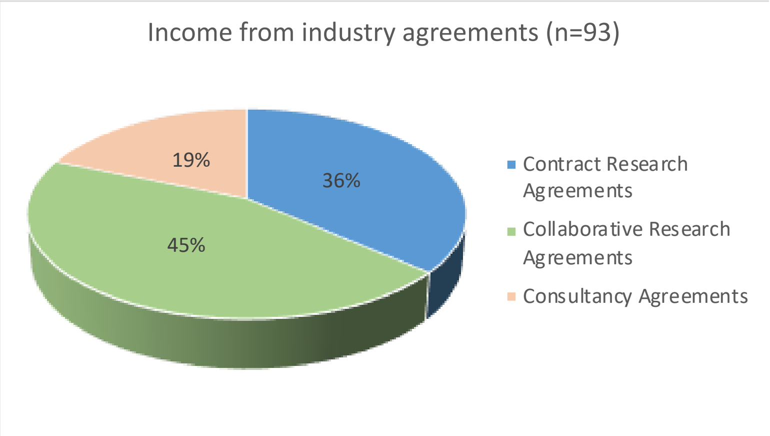
ASTP 2022 Annual Survey | Executive Data Report

Industry collaborations

ASTP
A World of
Knowledge
Transfer

| Number of agreements and income





In FY2020, European KTOs reported that a combined total of 126,343 agreements with the industry have been concluded. A breakdown of these number across different industry agreement types are given in the first table below. Consultancy agreements are the most frequent form of engagement between academia and industry. The second table shows the detail of the €2.7 billion of income generated during FY2020 by the active agreements with the industry.

The two pie charts are built up from the KTOs that have populated data for the three types of agreements (111 KTOs for newly signed agreements and 93 KTOs for the income generated during FY2020). Although collaborative agreements count for 10% of the number of contracts, they generate 45% of revenue from industry agreements.

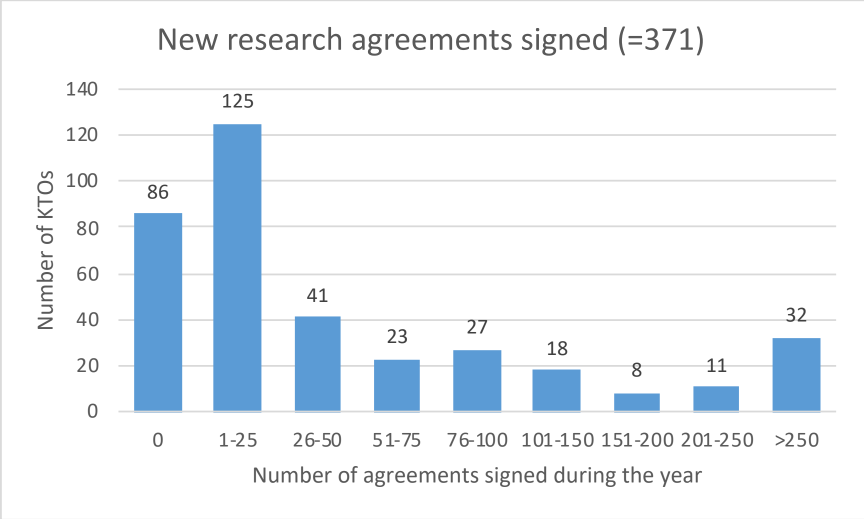
Number of new Industry agreements	Respondent KTOs (n)	Total
Contract Research Agreements	384	27 875
Collaborative Research Agreements	193	12 023
Consultancy Agreements	367	86 445

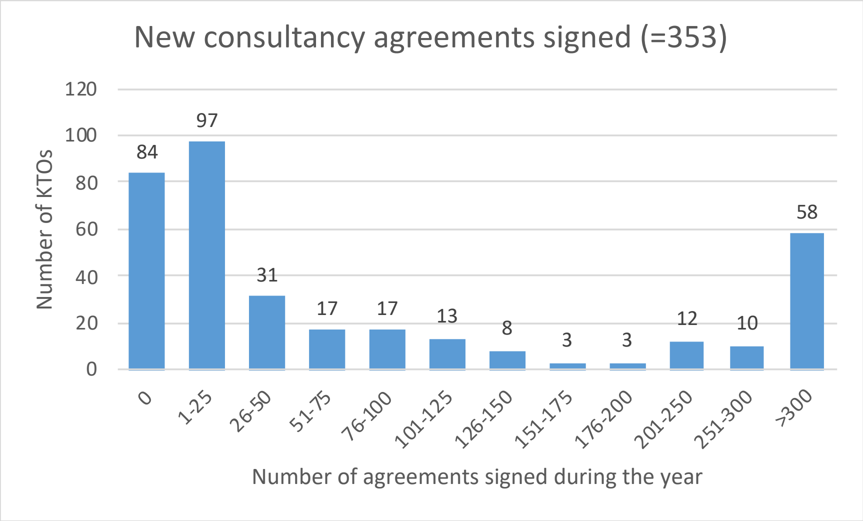
Income from Industry agreements	Respondent KTOs (n)	Total (€)
Contract Research Agreements	359	1 383 988 718 €
Collaborative Research Agreements	153	890 385 522 €
Consultancy Agreements	338	460 237 418 €

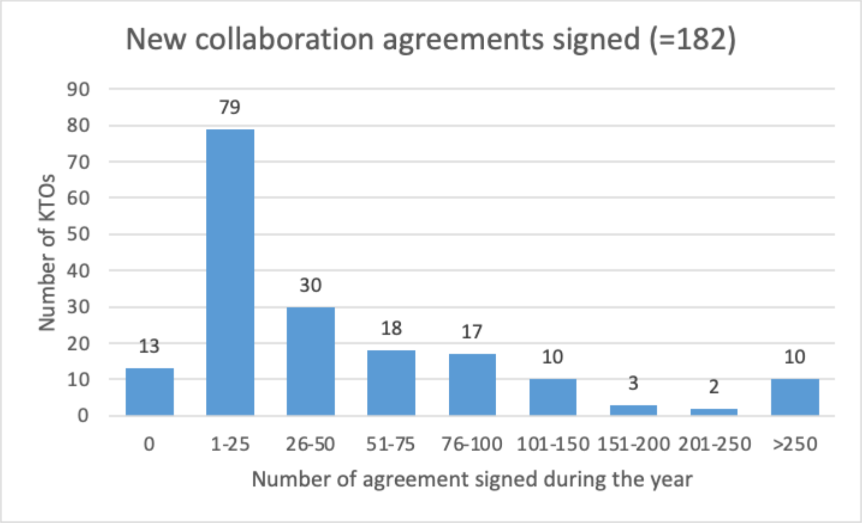
| New agreements by type

The graphs in this section give a more detailed look at the distribution of the number of new contracts concluded per KTO.

About half of the KTOs that have concluded at least one new agreement during FY2020, signed less than 50 (48% of KTOs for consultancy agreements, 64% for collaboration ones, and 64% for research agreements). Between 5% and 16% of the KTOs have concluded over 250 agreements of a specific type.





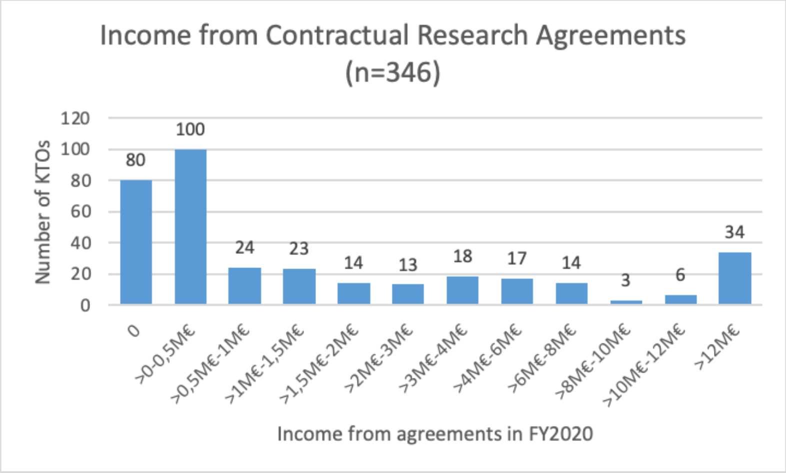


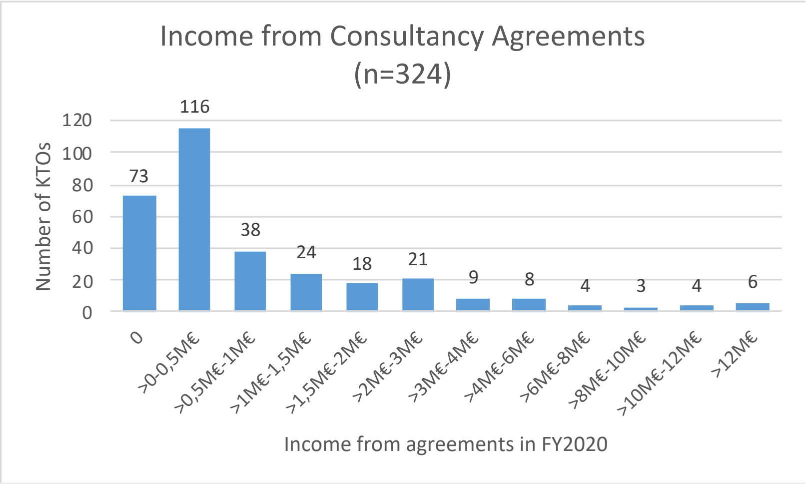
| Income from agreements by type

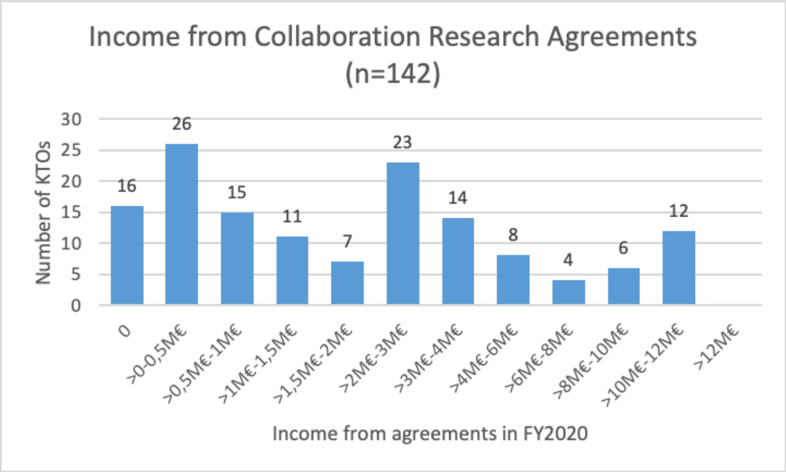
This second page gives an overview of the distribution of income per KTO for each type of industry agreement.

The distributions show that for most of the KTOs, the higher revenue from the industry is generated by collaboration agreements (47% of the KTOs totalize a revenue over 2M€) and from research agreements (30% **of the KTOs totalize a revenue over 2M€), rather than from consultancy (17%** of KTOs generate more than 2M€ from consultancy).

The high total income from contract research (1.383M€) is mainly due to a small number of KTOs. Indeed, 10% of the responding KTOs achieved over 12M€ of revenue, representing 67% of the total income.







European Knowledge Transfer Landscape

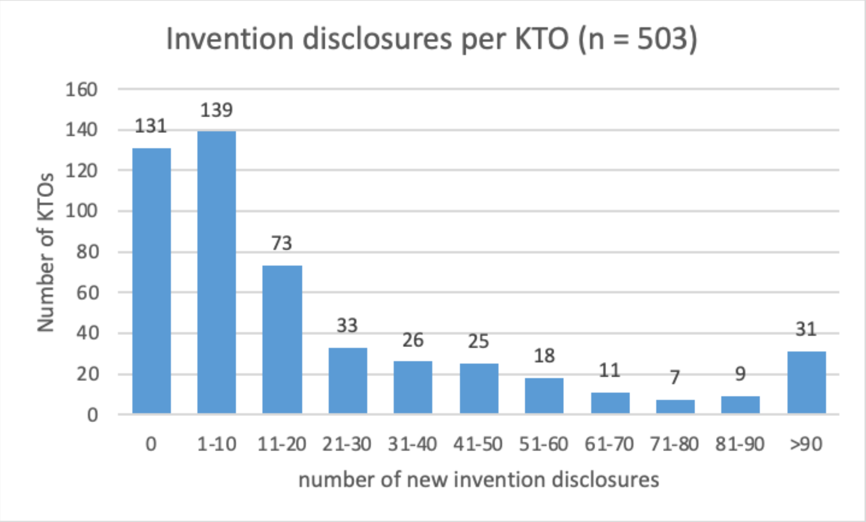
ASTP 2022 Annual Survey | Executive Data Report

Intellectual property (IP) management and commercialization

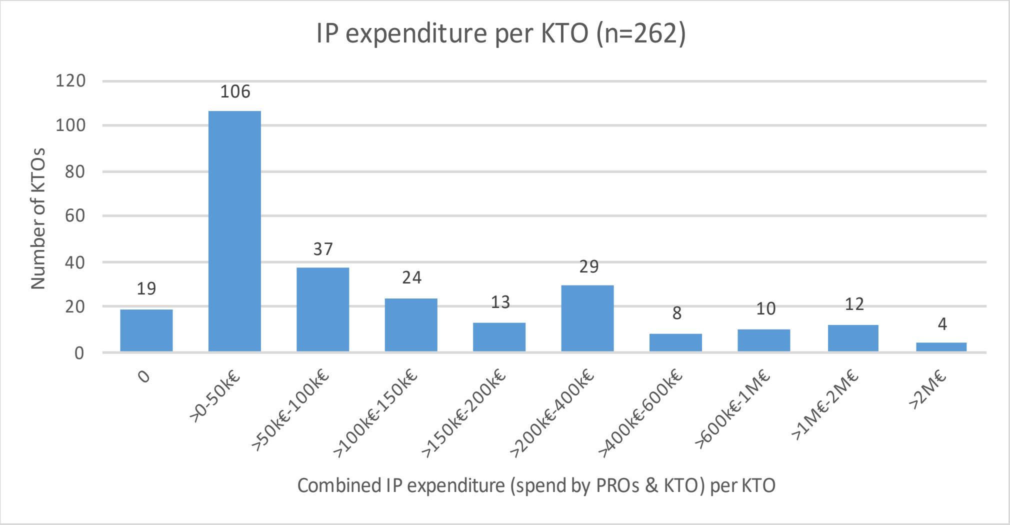
ASTP
A World of Knowledge Transfer

| IP resources

IP management is a core activity of KTOs, as it provides the basis for the commercialization of research results. The first step of the commercialization journey consists in detecting potential results to valorise. The latter are materialized by “invention disclosures”, the pipe of raw material for KTOs to produce valorised assets.



The amount spent by the KTO (and/or the PRO) on IP protection also gives an overview of KTOs IP management activities. The graph below shows that 40% of offices have spent a minimal amount of up to 50k€ on IP protection in FY2020, and a small minority did not spend any budget (7%).

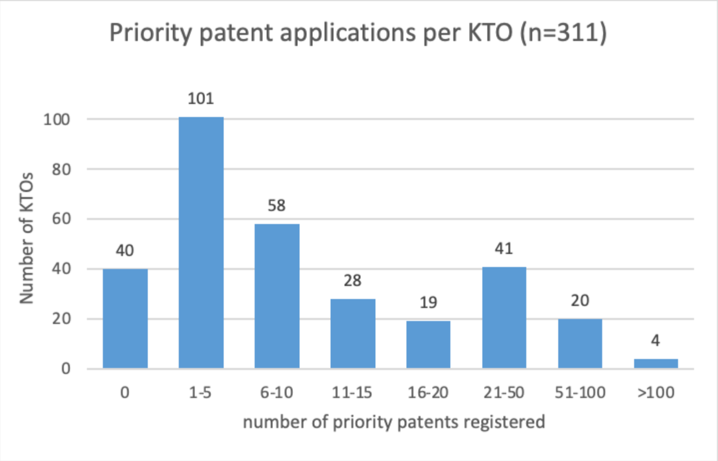


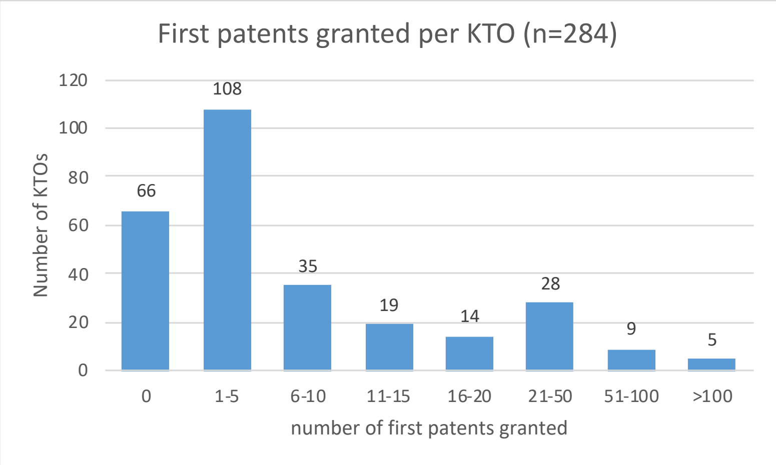
| IP portfolio

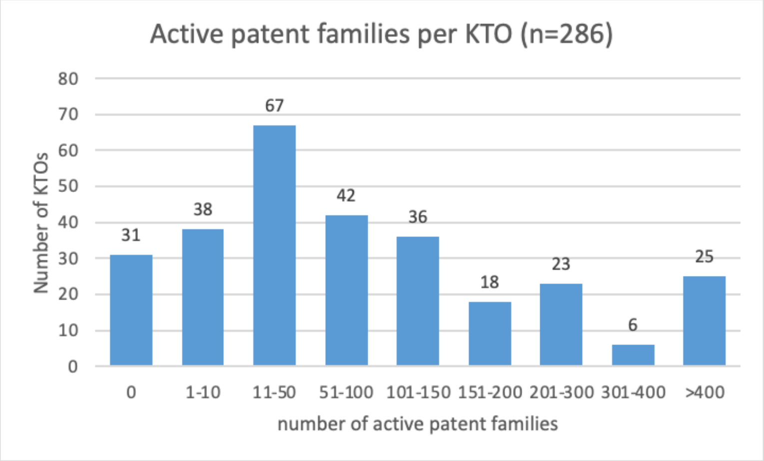
To avoid redundancy and give a complete view of the IP patent portfolio, three metrics are used, besides the number of invention disclosures: the number of priority patent applications, of first patents granted, and of active patent families.

As the number of responding KTOs is slightly the same as last year, we notice that the number of priority patent applications and of first patents granted is quite the same, when the number of active patent families has slightly decreased.

KTO´s IP Activities	Reponding KTOs (n)	Total
No. of invention Disclosures	309	12 822
No. of priority patent applications	311	4 479
No. of patents first granted	284	3 352
No. of active patent families	286	39 451
Among which licensed or optioned Patent families	154	4 103







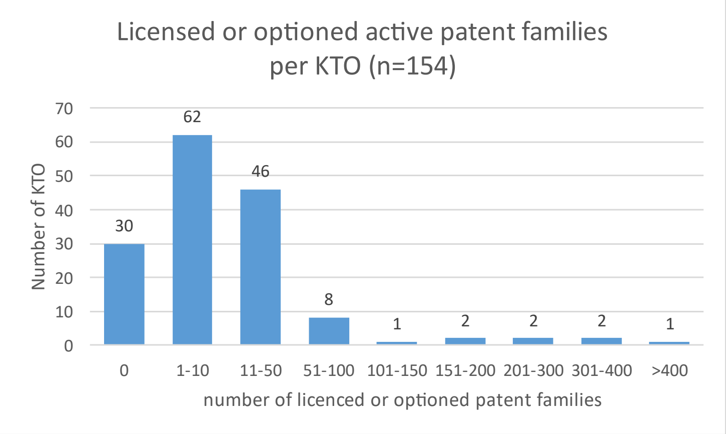
| IP commercialization agreements - LOA

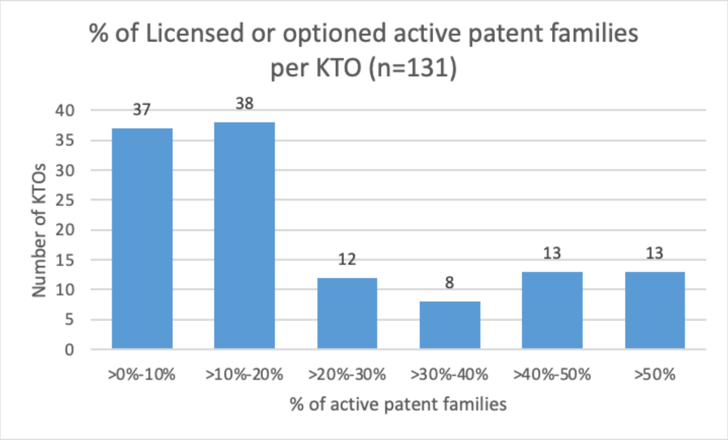
A license agreement is the most common form of IP commercialization, as shown in the tables. In addition to this, agreements on the transfer of ownership (assignment) and option agreements are two other forms of commercialization, less frequently used.

The survey collects detailed data on licenses: the number of licenses for software and for research material licenses besides the more classical licenses of patented IP. The research material licenses enable the use of IP, without a direct lead to new products under development or on the market. The high number of software licenses is linked to the nature of software which is easily licensed to multiple licensees since it is often commercialized through non-exclusive end-users licensees.

The two graphs below show the percentage of patent families per KTO licensed or optioned by the end of FY2019, showing the cumulative licensing activity until the end of 2019 (and not only the activity that took place in 2019)

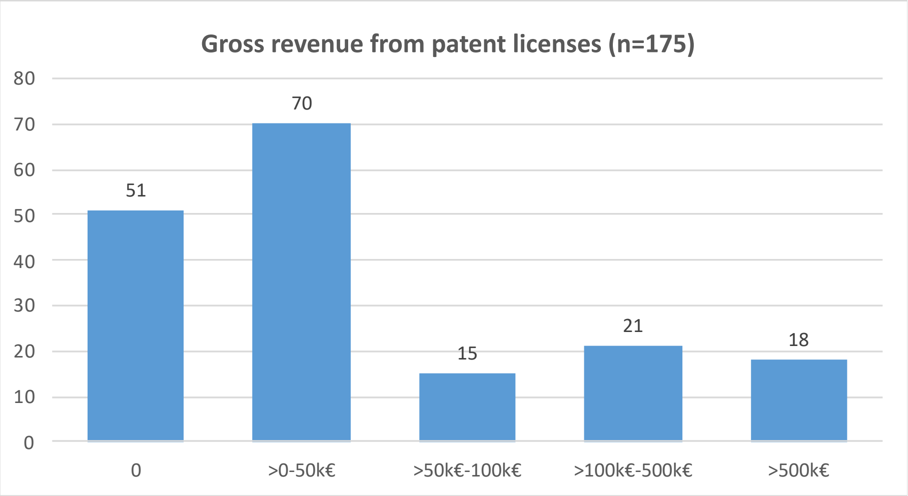
Commercial contracts	No. Of responding KTOs (n)	Total number of agreements signed
Licenses	187	1 562
Options	133	127
Assigments	159	358



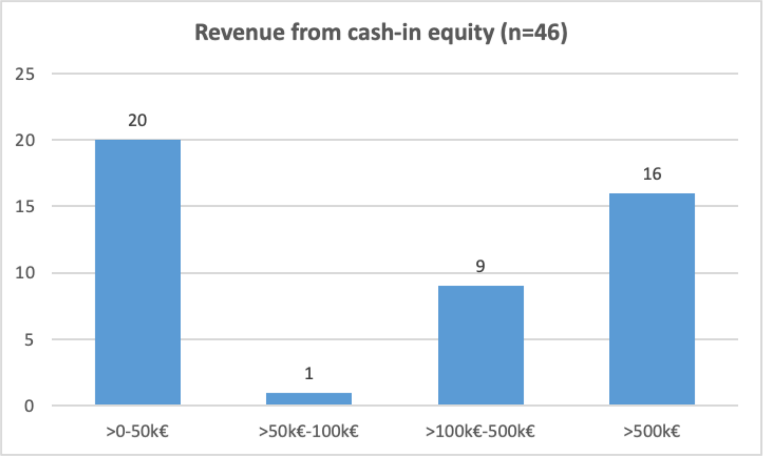


License agreements	No. Of responding KTOs (n)	Total number of agreements signed
Patent licenses	170	769
Software licenses	129	305
Material licenses	140	283
Other licenses	130	205

| Commercial revenue from IP



An impressive aggregate total of 753M€ in commercial revenues from IP has been reported for FY2020 by a total of 441 respondents.
This represents a substantial increase, coming from a larger data (responding KTOs) as well as from an increase of the reported revenues. Both revenues from patent licenses and cash-in equity increased.
Among KTOs providing data for this metric, only 46 do have revenue from cash-in equity (257 KTOs reported that they have no revenue from cash-in-equity).



IP Revenues	No. Of responding KTOs (n)	Total (€)
Commercial revenue from IP	441	753 188 000 €
of which gross revenue from patent licenses	175	123 715 000 €
of which cash-in equity	303	105 022 000 €

European Knowledge Transfer Landscape

ASTP 2022 Annual Survey | Executive Data Report

New business creation

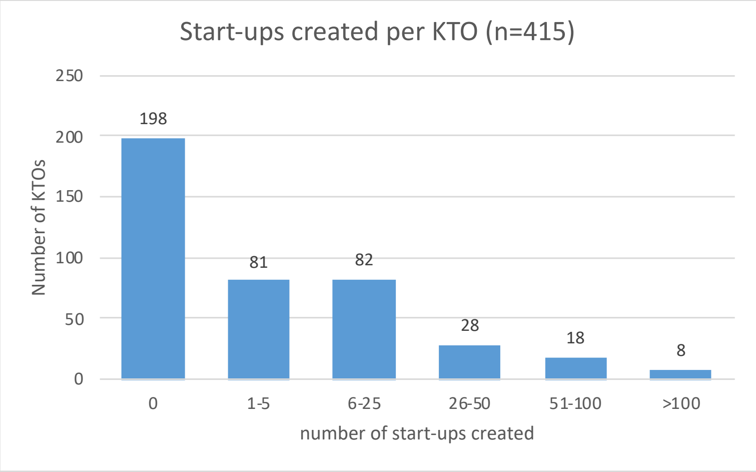
ASTP
A World of
Knowledge
Transfer

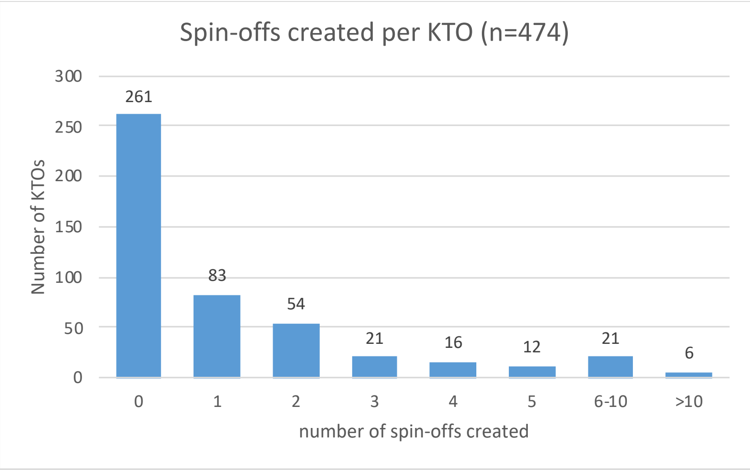
| Spin-offs and start-ups

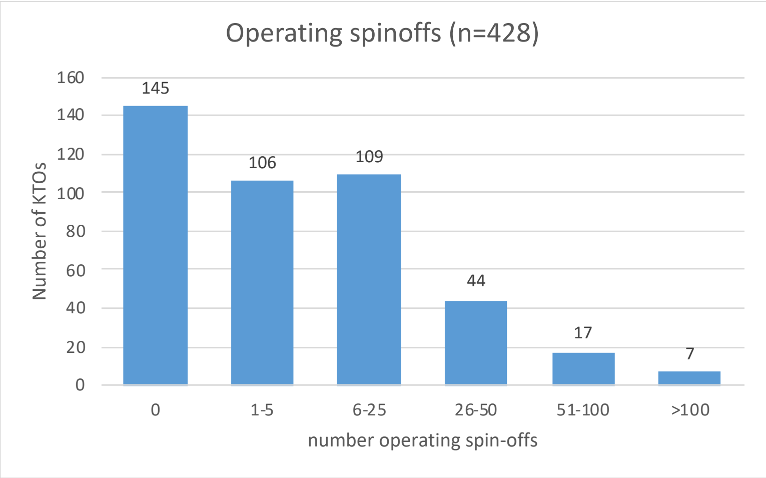
The table below shows that a majority (55%) of the responding KTOs did not create any spin-off. And nearly half of them (47%) did not create any start-up.

Gathering data around the legacy of earlier spin-off creation, such as how many are currently still operating (third graph), is an attempt to take a snapshot of the potential impact on the local economy. There can often be challenges for KTOs to gather this data, especially for companies that may have relocated, or whose connections with the PRO have expired.

	Responding KTOs (n)	Total number
Spin-offs created	474	612
Operating spin-offs	428	5 439
Staff in operating spin-offs (FTE)	129	51 980
Start-ups created	415	4 821







| References

List of abbreviations

FTE	Full Time Equivalent
FY	Fiscal Year
IP	Intellectual Property
LOA	Licenses, Options, Assignments
KT/KV	Knowledge Transfer /Knowledge Valorisation
KTO	Knowledge Transfer Office
PRO	Public Research Organization

The questionnaire that enables the collection of data presented in this report is available here

Survey Committee resources and previous annual survey reports are available here

2022/2023 Survey Committee members

Sandra Aresta
Co-Chair

Olivier Gillieaux
Co-Chair

Laura Kreiling

Olivier Vande Vyver

Jacopo Fanti

Claudio Truzzi

Become involved by

taking part in the current survey on FY2021
https://bit.ly/ASTPktsurvey23

participating when survey on FY2022 opens this fall

Contact us

Sandra Aresta & Olivier Gillieaux,
co-chairs of ASTP Survey and Impact Committee

sandra.aresta@cibio.up.pt - o.gillieaux@uliege.be

ASTP survey contact

arlyta.wibowo-kruzinga@astp4kt.eu

Citation: ©ASTP 2022 Annual Survey - Executive Data Report on Financial Year 2020