



COMMERCIALIZATION AND FUNDRAISING STRATEGY AT CTU 2023-2030

1. THE SITUATION OF COMMERCIALIZATION AT CTU

The purpose of this section is to describe the background for the commercialisation strategy of CTU. The starting points are deliberately described more "sharply" than they necessarily have to be in reality - however, in this way the commercialisation strategy should appear in clearer contours.

A. NEGLIGIBLE RECURRING REVENUE

Although CTU often carries out or participates in academically and scientifically interesting projects within its research, development and innovation ("R&D&I"), it generates only a negligible amount of recurring income (e.g. from licence fees) from R&D&I - it is "millions of CZK" per year. Within the additional activity of "contract research", although the university generates a nominally more significant amount (approx. CZK 340 million in 2022), it is still less than 5% of the university's total revenues; moreover, these revenues are realised on nearly 1,200 contracts, i.e. individual contracts are "on average" insignificant. The above is evidence that the university is performing low-value 'wage work' ('incremental') rather than bringing high ('differential') added value.

For these reasons, the university is existentially dependent on public resources (institutional, grant funding) and has no means for its long-term development, including investments in the commercialization of its research, development and innovation outputs.

B. "HANDING OVER" INTELLECTUAL PROPERTY AND INCOME FROM COMMERCIALISATION

The existing dependence on external funds (from this perspective, especially grant or commissioned funds - e.g. from additional contract research activities) in conjunction with the assumed low commercial value (relevance) of the outputs leads the university to favour immediate/short-term income ("wages for work") over the theoretically many times higher long-term income (income from future commercialisation); the potential of this income (or, alternatively, the potential of the future commercialisation of the outputs) is not sufficient. It does not consider its source in the form of intellectual property or a share in it) to be valuable and therefore often 'hands it over' to application partners.

C. COMMERCIALLY WORTHLESS MODEL OF "DELIVERING" THE RESULT

The low 'reward for work' pushes the university into delivering value in the form of 'consultancy' (at most a one-off solution in the form of 'work'). The university is therefore only responsible for the outcome to a limited extent, which - from the perspective of the application partners - again reduces the value of the output and retrospectively reinforces the 'wage work' model.

Only rarely does the university bring the solution to the level of a comprehensive "product" that would allow "scaling" the solution, i.e. replication of its sales, ideally without the participation of the "research team" (regardless of whether it is on the account of the university - e.g. Spin- off, or on the account of a third party - an application partner).

D. UNATTRACTIVE SELF-PRESENTATION

Furthermore, the prevalence of wage labour (selling "activities") leads to the university presenting its "capacities" (resources, activities) rather than its "competences" (benefits), which makes its offer understandable and interesting again for the commissioners of (partial) research assignments, and not for the "owners" of the application partners, who are the only ones able to discuss with the university the reasons and ways of commercialising intellectual property and sharing the proceeds.

E. R&D&I REACTIVITY AND COMMERCIALISATION

The concept of commercialisation in the university has traditionally been "reactive". R&D&I "receives" demand from the outside, which it does not try to understand very commercially, let alone "shape" it - one reason for this is that it deals mainly with R&D staff on the side of application partners (not with their "owners", see previous point).

Commercialization departments¹ take over the "outputs" of R&D&I and look for their application on the market - only to find out later that there is no demand for the solution (because the solution does not solve the "real" need), there is already a better solution on the market, etc.

F. DETACHMENT OF R&D&I FROM COMMERCIAL REALITY

Originators, respectively research projects (usually those that have their internal origin at the university and are subsequently to be commercialised "on the output" - see previous point) often:

- start with their own "solution" without prior understanding (the nature) of the problem
- based on their assumptions, not on information from (potential) customers (with whom they do not talk) and their "needs"
- do not think in the context of market potential (market size, customer segments), do not think big
- do not identify or underestimate competitors (or substitutes)
- unable to accept the principles of an agile ("lean) approach to commercial opportunity (minimum necessary = entrepreneur vs. maximum possible = scientist)
- they are not product-oriented and, with regard to the previous point, they do not recognise the concept as an essentially unfinished so called "minimum viable product" (MVP), they do not systematically and iteratively validate their solutions with customers
- are not able to (or rather, given sustainability commitments or the need to generate additional grant funding, they cannot) abandon research that has no commercial potential

G. NON-TRANSPARENCY OF THE CONDITIONS OF TRANSFER TO THE ORIGINATOR

While the transfer of outputs of contract research to an application partner is often a "situational" matter (taking into account very specific inputs and roles of research partners, the method of funding, the potential of the output - for the partner or for the "market"), the situation is different for "independent" research of originators within the university (employees, students) - whose outputs may be known to commercialization departments with a delay. Here, the existing 'situational' approach leads to the fact that the terms of transfer are non-transparent *ex ante* from the originator's point of view, which, combined with a certain distrust of the university (as an 'agile' business partner),

¹ Departments, or organizational units of the university involved in the commercialization of R&D&I outputs, or intellectual property to which the university exercises rights. These include in particular the Rector's Department for Technology Transfer and Fundraising (including its incubator unit InQBay), persons or commercialisation units at individual units (vice-deans for external relations, commercialisation specialists, unit secretaries, etc.), the university transfer company CTU Tech s.r.o., a 100% subsidiary of CTU, or the CTU Council for Commercialisation.

leads to some originators preferring to commercialise 'behind the gates' (and therefore without) the university.

The non-transparency of the transfer conditions has a similar effect as on the originator on (potential financial) investors in innovations originating at the university.

H. FRAGMENTATION AND LACK OF TRANSPARENCY OF R&D&I

Academic, and therefore entrepreneurial (in relation to application research partners), freedom and initiative supported by the system of public grant funding for R&D&I gives rise to so called "bottom-up" research projects. This is good at first sight, because the system relies on the personal motivations of the participants (apart from situations where the motivation is primarily driven by the "existential" need to obtain public funding, almost regardless of the contribution of the project or its quality) and their possibility/ability to come to an agreement "on short notice".

However, this approach also generates some significant negatives...:

- (mutual) opacity of activities, not only when viewed from the outside, but also for the participants (originators) themselves within the same research organisation
- due to excessive focus on activities, we lose track of the direction in which we are moving (we should be moving) - from an academic/scientific perspective, let alone a commercial one
- in the opacity of activities ("what we do"), it tends to lose sight of our competences ("what we are capable of" and "what it is/can be good for")
- fragmentation of activities results in too wide a spread of resources and "defocus", which:
 - reduces the probability of success (and in the case of success, its "size")
 - increases the administrative burden
 - inherently increases the need for additional funding (more projects → more resources)

As a result of the above, among others:

- R&D&I outputs are rather partial and therefore from an external perspective (e.g. from a potential contributor to university funds - see section 6. below) unattractive
- self-presentation through activities (see section 1. point D), rather than competences (in addition, combined with a non-value-based model of "delivering the result" - see section 1. point C) makes it impossible for application partners to find suitable counterparts on the university side
- the system (in combination with other academic and publishing responsibilities) leads to the fact that it "plugs away" at the level of individual researchers, which reduces the attractiveness of their continued stay in science, or their lack of interest in commercialisation

2. GOAL OF COMMERCIALISATION

The aim of commercialisation is to substantially increase the aforementioned recurrent income from R&D&I results from licence fees, ownership and disposal of shares in companies ("exits"). Figuratively speaking, the aim is to go from being a tenant of the apartment (who has to earn money all the time in order to pay the rent) to being the owner of an apartment building which bears the rent 'automatically'. The aspiration, to which we subordinate the organisation of commercialisation, the selection of projects, etc., is recurrent income at the level of tens of millions of crowns per year until 2030. The level and dynamics of recurrent revenues are also a key indicator of the performance of the organisational units involved in commercialisation.

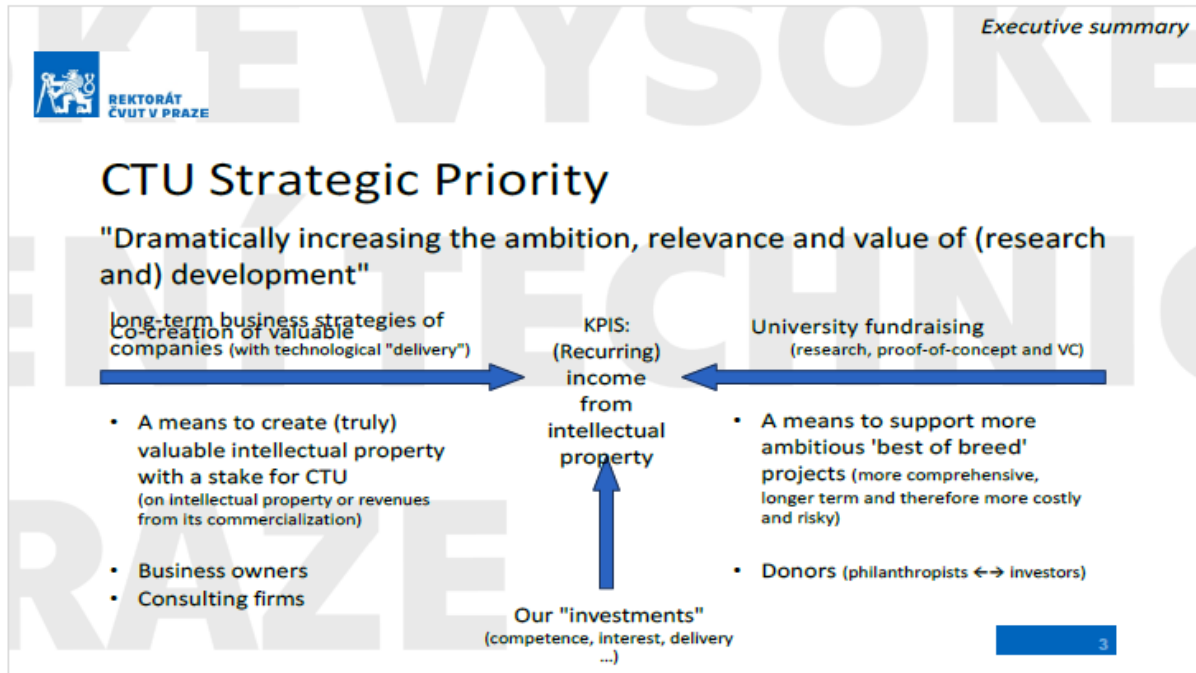
With regard to the focus of CTU (applied research and development and innovation rather than basic research, moreover exclusively in technical fields), the emphasis is deliberately more narrowly placed on "commercialization" (in laconic terms - generating income) than other ways of valuing knowledge.

The consequence of the commercialisation objective will be a gradual reduction of dependence on public support sources (e.g. for "proof of concept" activities, but for R&D).

3. SOURCE OF GENERATING INCOME - VALUABLE INTELLECTUAL PROPERTY

The means to achieve the objective is a corresponding substantial increase in the economic added value (potential) of the R&D&I results for customers, whether specific ("application partner") or as yet undetermined ("market"). The more commercially valuable the solution is to the customer/market, the more likely the application partner will be willing to "share" the commercialisation revenues, the easier and more "valuable" the market penetration will be.

Economic Value Added (EVA) is a more comprehensive measure because, in addition to the actual return (profit) from commercialisation, it also takes into account the amount and structure of capital (investment) required to achieve this return and therefore the "smartness" of the solution with which the result is achieved.




4. COMMERCIALISATION STRATEGY - FRAMEWORK

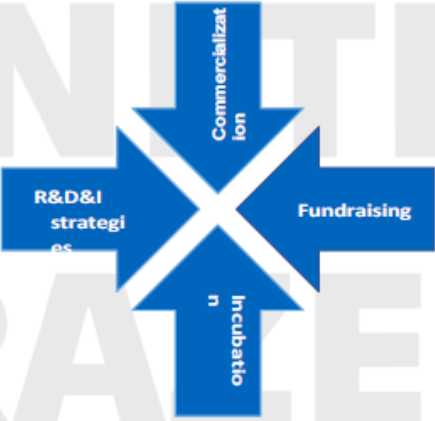
The commercialisation strategy of CTU therefore aims to significantly increase the economic added value of the university's R&D&I results. It includes 4 pillars, of which the first 2 pillars are strategic priorities that support the remaining 2 pillars:

- i. more commercialization "on entry" and commercialization on the originator "without hesitation"
- ii. fundraising private capital for higher R&D&I ambition/relevance and actionability
- iii. incubation (and acceleration) for greater adherence to market needs
- iv. R&D&I strategy as a tool for R&D&I prioritization and planning for the purpose of targeting commercialization "upstream" and fundraising

Strategie
5



4 pillars of commercialization at CTU



- **Commercialization**
 - "Turning of the guard"; on the output → on the input
 - Co-creating business strategies → research assignments
 - Creating / claiming intellectual property = source of recurring revenue
 - High economic added value
 - Technology transfer "without hesitation" = transparency (standardization) + price friendliness (10+10)
- **Incubation**
 - Oportunit → Scientists
 - Accelerator virtualization in collaboration with VC firms
- **Fundraising**
 - "Gró"
 - Why □ → How), "objections"
 - friends & family proof-of-concept
- **R&D&I strategy (fundraising story)**
 - "Vessel-related" fundraising ("what for")
 - R&D&I ambition and relevance + path (vectors + trajectories)
 - Big-picture + Trendsetter

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5. MORE COMMERCIALIZATION "AT THE INPUT" AND COMMERCIALIZATION "AT THE OUTPUT WITHOUT HESITATION"

A. MORE COMMERCIALIZATION "ON THE INPUT"


Beyond the existing "traditional" commercialisation "at the output" (see section 1. point E above), which needs to be "calibrated" in incubation or acceleration (see section 7. below), we need to put more emphasis on commercialisation "at the input", i.e. proactive (co)creation / self-delivery not primarily of technical solutions, but of business opportunities (or coherent strategies) delivered subsequently by us through technical solutions, regardless of whether the addressee of these opportunities is a specific entity (application partner, strategic investor) or the "market" in general (through a university spin-off or start-up targeting this market).

Here, the following elements are relevant in the case of application partners / strategic investors:

- i. to cooperate (more) with entities that we have real influence on, in terms of their owners (in the position of "decision- makers")
 - usually, it will be Czech-owned companies rather than multinational corporations, which, if successful, will mean a "win-win" for the Czech economy

- ii. forcing oneself to think about where and how economic added value is (can be) created in given subjects, even using technologies that the subject may not even know yet ("I don't know what I don't know"); this will require the university to, among other things:
 - shift from a trend follower to a trend setter
 - very close cooperation (and mutual learning) between originators and between originators and commercialisation personnel
 - targeted competence and capacity building on the university side (including interdisciplinary) - to be able to deliver more comprehensive offers to partners: $1 = 1 \rightarrow 1+1 = 3 \rightarrow 1+1+1 = 6 \dots$
- iii. with hypotheses ad ii), ideally already quantified, to proactively and iteratively approach the owners of these entities with business opportunities
- iv. be prepared to adopt a different model of delivering commercial value to the customer/market, where the university takes on a higher level of responsibility for the outcome (consultancy \rightarrow work \rightarrow economic outcome)
- v. knowing the high added value and the ability to deliver it, not least by assertively asking for a share of the result or "success" (in the form of the aforementioned recurrent income), even in the context of non-traditional business models for universities:
 - variable performance-based licence fees
 - a stake in the partner's existing company (in the case of a solution to a "problem" or incremental opportunity in the partner's existing business - the "spin-in" business model)
 - joint-venture business model (in case of a new business opportunity on the partner's side)

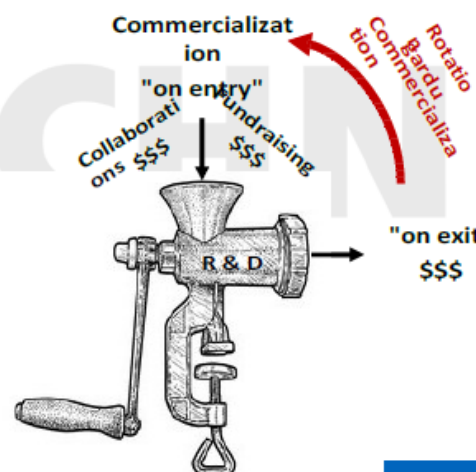
Similarly, a university can approach an opportunity that (for now) it has no application partner or that it does not even target specific application partners, but a general (undefined) "market"; a current example might be the various uses of AI. In such a situation, the university acts as a founder of a university start-up and subsequently seeks "co-founders" from among the university's employees or students and, if not found within the university, perhaps outside the university. If the proposition (market offering) of such a start-up is to be the future output of some (joint) R&D&I, this can take place in the standard way on the university grounds, with a subsequent transfer from the university to the start-up (effectively making the start-up a university "spin-off").



Commercialization

The mission of commercialisation

- **Generate for CTU**
 - incl. components and originators
 - **significant earnings = \$\$\$**
 - over time increasing %% of the university budget
- **primarily from non-public sources**
 - not grants
- **monetization of R&D&I "outputs" (= "IP")**
 - commercialization → transfer
- **or by generating "inputs"**
 - valuable assignments (with a private budget)



B. COMMERCIALIZATION TO THE ORIGINATOR "WITHOUT HESITATION"

It is the university's intention that our originators should have no reason at all to consider commercialising the outputs of "their" R&D&I, or intellectual property "without the university" (see section 1. point G above). At the same time, this objective cannot be achieved 'repressively' ('I must') but through a valuable 'proposition' from the university to our originators ('I want'), because only this can form the basis of a long-term collaboration which is inherently a source of higher overall economic benefit for both parties and risk reduction.

a) Proposition (value proposition to originators from the university)

Our proposition to the originators has 3 basic components:

- i. Ex ante transparent (and therefore largely standardised) conditions for the technology transfer of the outputs of "their" R&D&I to the originating company (spin-off), including a "favourable price" for the transfer
 - every student and employee (including new recruits) should know in advance the majority (default) conditions under which they can obtain the outputs of their R&D&I for commercialization
 - standardisation will allow specific cases to be processed more quickly, more of the processing can be done by the originators themselves, freeing up the hands of commercialisation departments
 - the majority conditions may be departed from in cases of special consideration, which will allow to take into account the specific conditions of creation of a particular intellectual property, etc.; the source of "insight" in specific cases will usually be the CTU units where the intellectual property was created

- ii. Transparency (predictability), uncomplicated and professional relationships and processes on the part of the university
 - CTU commercialization departments are the primary point of contact and source of help and information for commercializing originators; other departments should not interfere with commercialization if everything is working "standard" (including situations when "standard is not working"); this will fulfill the information and relationship continuity from the perspective of commercializing originators
 - In laconic terms, the role of commercialization organizational components is to commercialize colleagues
 - "cover" (effective commercialisation in accordance with legal and internal regulations and the interests of both parties) and
 - "shield" (creation of space for "independent" commercialization, especially in the case of university spin-offs and start-ups with university participation through the university transfer company CTU Tech s.r.o.)
- iii. Last but not least, there will be specific assistance with commercialisation, but this is a function of the limited capacity (resources) of the commercialisation organisational units
 - as resources (especially from future commercialisation revenues) increase, it will be possible to move from lower to higher level business-service models; these business-service models are:
 - *transactional support* - the actual "processing" of the transfer (license agreement, establishment of a university spin-off / start-up) as a necessary minimum for commercialization
 - *independent model with support* - commercialization departments behave more like an "investor" and only enter into commercialization in agreement with the originator in "difference moments" ("opening the door" to partners, negotiating business terms, safely negotiating agreed deals, especially in terms of intellectual property protection, "problem solving", etc.); part of this model is also ServiceHub support (see acceleration part 7. point. g)).
 - *partner ("co-founder")* - the commercialization department (and here specifically probably CTU Tech s.r.o.) can take over (usually temporarily) a certain comprehensive role within the commercialization (e.g. operations, support functions (finance, HR), business development, sales, etc.)
 - *on the university's own account* - overall implementation of the commercial opportunity through a spin-off with a majority share of CTU, e.g. in the case when it is an interesting commercial opportunity, but the originator is not interested in its "execution" (the originator wants to remain in the role of "scientist-advisor")

b) Standardised conditions for transfer to the originator

In connection with part 5 item B letter a) point i) above, we present the basic idea of standardised conditions for the technology transfer of intellectual property to spin-off originators - the so-called "10+10" transfer:

- (non-dilutable or conditionally dilutive) 10% share in the company with basic minority rights
- technology transfer in the form of an intellectual property license with a licence fee of 10% of the company's income or net sales prices of sales resulting from the transferred intellectual property (after discounts excluding VAT) ...
 - set-off of licence fees received (under a licence agreement) against the claim to a share of profits due to the ownership of a share in a spin-off company
- ... "with validation", i.e. conditioning a "better" licence on the achievement of results measured by the cumulative volume of royalties received
 - subject matter or territorial scope of the licence narrower → broader
 - non-exclusive → exclusive license
 - the possibility of losing (irreversibly) the right to a "better" licence in the event of a future decline in performance
- Free license to mark the university, or the "spin- off CTU" mark, conditional on achieving minimum results
- CTU does not participate in the financing of the company (either through loans from other shareholders or through additional payments outside the share capital)
- CTU strongly supports university companies in raising development (venture) capital and is prepared to negotiate terms in the event of a "substantial" investment
 - licence fee and (in)dilutibility
 - transfer or assignment of intellectual property rights to spin- off company

c) Some aspects of (standardisation of) transfer and commercialisation

CTU is well aware of some of the "pitfalls" of transfer or commercialization:

- i. commercialisation of intellectual property always starts from scratch, often with the need for (large) initial investments and continued research collaboration between the originators (or university) and the acquirer of the intellectual property rights
- ii. intellectual property is a "unique commodity" with a limited pool of buyers
- iii. virtually no two intellectual properties are 'the same'; IPs will always differ in their inputs and commercial potential; the same applies to commercialisation "implementation teams"

- iv. the most suitable interested party (for reasons of motivation, knowledge, suitable contacts) is often the originator of the intellectual property itself; he is also by definition the university's preferred candidate
- v. the transfer price (valuation) "determined" usually solely on the basis of assumptions does not correspond to the "market" price that the acquirer is actually willing to pay, which is always the result of commercial negotiations
- vi. last but not least, intellectual property in itself has no commercial value unless and until it can be "realised" through long-term, consistent and focused work ("perpetual mobile does not exist" and "it will not sell itself")

The CTU considers these pitfalls to be "inherent", stemming from the very nature of intellectual property and its transfer. Elimination of these pitfalls would be possible in practice only if the university did not make the transfer. Thus, if a university has high commercialisation ambitions, it must necessarily accept these pitfalls and monitor (control) and mitigate their impact appropriately.

A fundamental way to control/mitigate impacts is to consistently link the "price" of the transfer to the results of commercialization. The price is a function of (i) the amount of revenue that the university realizes in absolute terms from the commercialization of the intellectual property, and (ii) the quality of "goods" (in this case, the scope and content of the license) that the university provides to the transferee in exchange for that revenue. The principal mitigants are therefore:

- licence fee income set at a variable rate (percentage, per unit of product produced/sold using the intellectual property, etc.)
- licensing revenues determined from commercialization revenues rather than profits (simpler calculation, less room for influence and inconsistencies)
- conditioning or confirming the specific scope (content) of the licence on the performance of commercialisation
- transfer or assignment of intellectual property rights is not the preferred form of commercialisation and will only occur in justified cases
- these basic means were reflected precisely in the standardisation of the conditions of transfer to the originator (see section 5 point B letter b)).

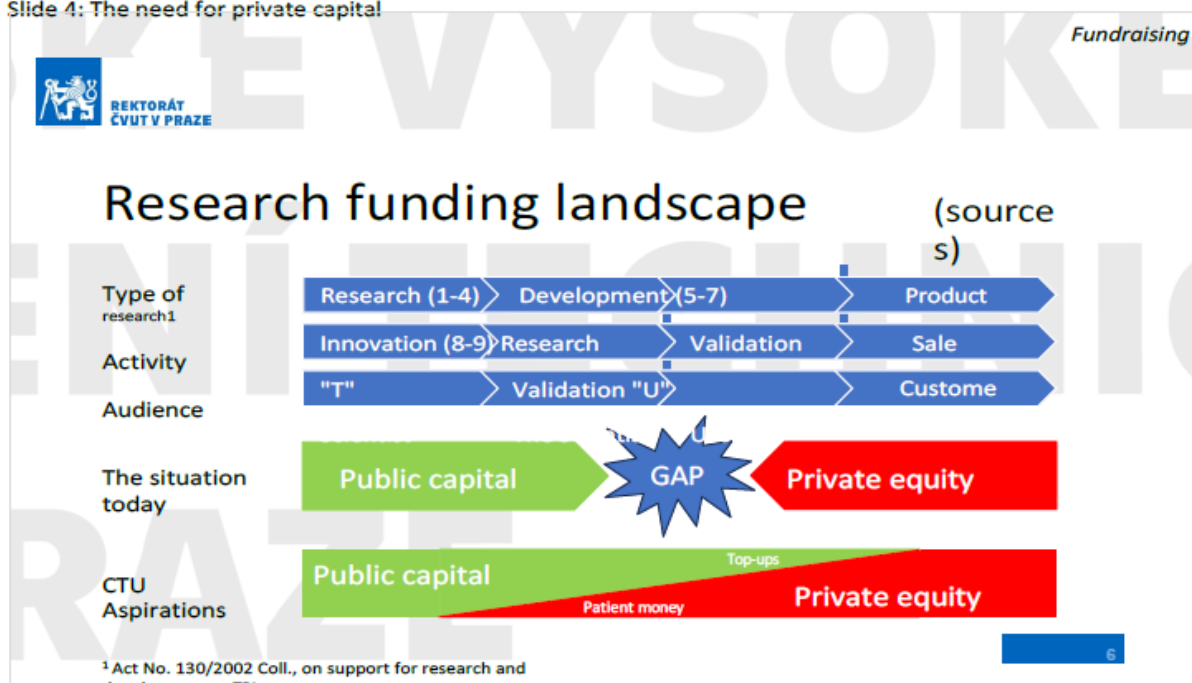
CTU also recognizes that standardization of transfer terms is somewhat inconsistent with the principle of uniqueness and singularity of intellectual property (see section 5. point B letter c) points ii. a iii. above) and the possibility of fixing its price by skilful negotiation (see section 5. point B letter c) point v above). However, CTU (Department of Technology Transfer and Fundraising) assessed the situation that there is a higher risk of harm to CTU from not realizing the opportunity (because the originator does not have the time, patience, skills... to negotiate non-transparent conditions with the university), i.e. from its implementation outside the university (because the originator finds the university's participation "expensive" - transfer price + frictional costs in the long-term relationship

with the university), than in partial cases of "suboptimal" set prices. However, the situation will be continuously monitored and evaluated.

6. FUNDRAISING PRIVATE CAPITAL FOR HIGHER AMBITION/RELEVANCE AND ACTIONABILITY OF R&D&I

More valuable solutions (associated with higher ambition, relevance, and therefore commercial potential of R&D&I) usually carry a higher risk of failure and a longer time horizon for delivery and consequently the need for higher "investments" in R&D&I. Resources of these characteristics are, with exceptions ("excellent research" in the required order of magnitude more likely to be available from European funds, for which the success rate of Czech applicants is generally low), generally not available from public sources and therefore need to be supplemented from private sources.

Slide 4: The need for private capital



a) Fund structure

The university therefore intends to establish a "fund structure" for private capital fundraising that will follow the logic and needs of the different stages of R&D&I (in relation to the respective TRL - "technology readiness levels"). The fund structure has 3 categories of funds, within each category there may be more funds (or sub-funds) depending on the type of resources or their use.

All funds are intended as "equity-type funds" (endowment or "evergreen" funds) - contributions form a corpus that is professionally invested and only from the returns (ideally after an allowance for inflation) are the funds disbursed.

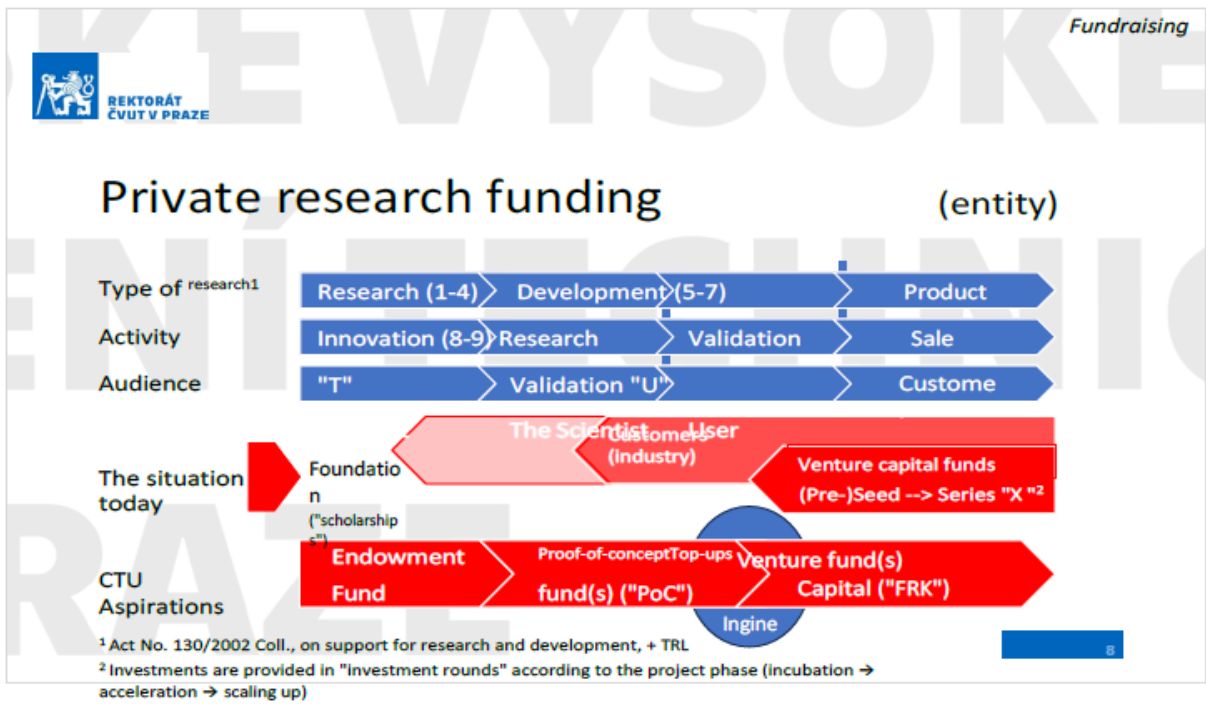


Table 1: Fund structure - volume ambitions

FUNDS	TRL (FLUIDIC ASSUMPTION) ²	INTENDED VOLUME OF THE CORPUS - "AMBITION" (TIME HORIZON)
Research	TRL ≤ 4	billions of EUR (2050)
Proof-of-Concept (PoC)	5 ≤ TRL ≤ 7	tens of millions of EUR (2030)
Venture capital funds	TRL ≥ 8	hundreds of millions (2038)

The advantage of the capital fund is that the corpus is not "eaten-up" (it is eternal, or continuously growing), which brings greater stability and predictability of future resources for future (research) contributions without the need to continuously acquire the necessary funds "always anew"; the capital fund also means theoretically better availability of funds "at the given moment" and therefore greater "actionability" of our R&D&I. The disadvantage is the need to first build up a higher critical mass of capital in order to make the funds available at a productive rate.

Funds will require rigorous regulatory, governance and control structures and processes, but these are not the subject of this document. However, the fund structure will need to be largely independent of the university, both from the point of view of administration (management) of contributions and the provision of funds - otherwise it would lack credibility with a not insignificant group of contributors.

² The boundaries between the different types of funds will not be entirely sharp, and there may be overlaps between the focus of the funds.

b) Prioritisation of funds

The establishment of the funds will be prioritised in time as follows:

- i. Proof-of-Concept (PoC) funds, whether for "technology" ("T") or user ("U") validation
 - favourable combination of lower required contributions from the fund and higher TRL of the financed project
 - a suitable pilot candidate is the CTU Employee and Alumni Fund, from which, in addition to capital accumulation, we expect additional benefits: increased mutual engagement between the university, its employees and alumni, better identification of opportunities (including opportunities "behind the fence"), collective pressure to achieve results (peer-pressure) and better control of projects
- ii. research funds
 - natural extension of PoC funds towards lower TRLs (both by similar structure and by the need to build a precursor for proof-of-concept projects), which we expect to reduce risks in research
- iii. Venture Capital Funds (VCFs)
 - venture capital funds are already available on the market as standard, therefore creating our own venture capital fund is not so much a question of its need as a way of capitalising the success of our R&D&I and signalling our trust in it to co-investors

c) Sources of capital for the funds

The source of capital will be contributions from individuals (or their structures) and companies. The primary motivation of the contributors is to support R&D&I (WITHOUT any direct link to any return), while the secondary motivation is preferential access to the university environment or to the supported projects, including the right of "investor preference" (of course, taking into account the protection of emerging intellectual property, sustainability obligations, etc.).

d) Recipients of capital and use of funds

The recipient of the funds will usually be CTU itself (lower TRL levels), a university spin-off or start-up (higher TRL levels + in active commercialisation or on the way to it). The recipient may also be another person if the CTU intellectual property is being transferred or further (joint) developed.

The funds will be provided in the form of convertible grants³ (lower TRL levels), convertible loans or investments - capital contributions (higher TRL levels). One of the ways of using the funds will be co-financing of public grants with an increase in the share of European

³ Convertible grant = a convertible loan with a waiver by the fund.

grants, which require (absolutely) a higher level of co-financing (for which CTU does not actually have the funds).

e) Fundraising outside university funds

For the sake of completeness, let us add that the university or the originators can also fundraise capital outside the university funds, e.g. for specific opportunities, in particular university spin-offs and start-ups. They will not be under any obligation to use university funds and are free to use other sources of funding, especially if these offer more favourable conditions. We expect this "open" approach to bring funding conditions closer to "market" conditions (however "vague" this term may be in relation to the valuation of R&D&I outputs).

7. INCUBATION/ACCELERATION FOR GREATER ADHERENCE TO MARKET NEEDS

f) Incubation

The main purpose of incubation is to bridge a certain detachment from reality mentioned in section 1 point F, i.e. to make (paradigm shift on good practice examples) and through simple methodologies and mentoring to teach the originators to design solutions primarily on the basis of specific market needs, verified in particular by customer interviews, and to think in the context of market potential, scalable "products" and coherent (yet simple) business models, etc. The output of the incubation is the structuring/evaluation of the R&D&I project as a commercial opportunity and a basic "*minimum viable product*" (MVP) for testing with real users.

The benefit of incubation should be to increase the commercial potential and success rate especially for projects initiated internally within the university (projects "on the way out" from the perspective of commercialization), including timely termination of research projects without confirmed commercial potential (if these projects are not to be continued further for their scientific/publication potential, which decision, however, lies outside the scope of commercialization departments).

g) Acceleration

Acceleration follows smoothly on the incubation phase. The purpose of acceleration is to create a "company" (university spin-off or start-up) with a functional team and a product validated by the first paying customers, which is ready to be presented to external investors.

With the intention of enabling the originators to concentrate fully on commercialization (in a situation where they mostly have their "main" duties towards CTU in the academic and scientific-publication sphere), we are creating a "ServiceHub" - a network of proven

providers of basic services for newly established companies (accounting, tax, HR, marketing...).

h) Programme

The addressee of incubation/acceleration is the originator (employee or student of CTU, including former ones) - the bearer of a specific commercialization opportunity or at least its intention, who is also interested in realizing the opportunity. Due to the limited capacity of the commercialization organizational units, we approach these originators in cooperation with selected venture capital firms (funds), which provide us with their professional capacity in order to co-create future investment opportunities.

For this purpose, a comprehensive program was created, which is effectively a "reactivation" of the CTU incubator "InQBay":

- Controlled acceleration (3-6 months, longer in individual cases of high potential), preceded by controlled incubation (3-6 months) if necessary (expected for most projects)
- As part of the acceleration of a EUR 25,000 investment "joint venture" between venture capital firms and CTU in the form of a convertible loan
- Acceleration includes standardized technology transfer of potential CTU intellectual property
- 2 "seasons" per year (capacity up to 16 projects/year)

Within the programme, we also develop the functional and personal knowledge and skills of the commercialisation "promoters", always using and exemplifying their commercial opportunities. Although in the long run the development of "personal" capabilities has the greatest return for society, due to lack of resources commercialisation departments cannot afford this activity without the development of a specific opportunity.

8. R&D&I STRATEGY AS A TOOL FOR R&D&I PRIORITIZATION AND PLANNING FOR TARGETING COMMERCIALIZATION "ON ENTRY" AND FUNDRAISING

The university must be able to attract its 2 main target groups for commercialisation with an attractive vision and a plausible R&D&I strategy - business "owners" and contributors to university funds. Both groups tend to base their decisions about who to partner with or give their money to (whether as an investment or a donation) mainly on the partner's past demonstrable performance. Although a university can present good scientific (publication) results, the commercialisation results are worse (see section 1 point A) - unless we present as results the "start-ups" of our current or former students and staff, with which the university has in fact little in common.

To continue with the established practice and expect a different result would be, in the words of Albert Einstein, insane. Doing things "differently" (e.g. already in line with this

strategy) will certainly help, but it will still take a long time to deliver results. Moreover, it can be assumed that the availability and 'crowding-in' of private capital is itself a necessary - but of course not sufficient - condition for the ambition, relevance and ultimately the potential of R&D&I and its outputs (see the fundraising argument, section 7.)

Slide 6: Accent of Research Funds and PoC "Technology"

Fundraising

Where we're headed

Ambition (goal, path, effort)

Fundraising €€€

0

2 continuous containers

"What for?"

Results

Activity

Projects

Trajectories

Vectors

"R&D&I strategy"

(research funds and PoC "T") "Capital" = valuable intellectual property ("HDV")

- Company runs on "profit" x University "meets budget"
 - HDV is either not generated at all or is "handed over" in exchange for "dirty" money
- Let's generate (ask for) (a share of) IP with the possibility of further commercialization!
 - Must be conditional on our high added value (solution (+ delivery))
 - (Co)creating assignments
 - Potential → solution (not the other way around)

Slide 7: Accent on PoC "User" and Venture Capital (VC) funds

Fundraising

Where we're headed

Potential

- The Problem
 - Palpability, size
- The differential of our solution
 - Solving the problem
 - Vs. alternatives (competitor, substitute)
 - Barriers to entry (patent)
- Scalability

(PoC "U" and FRK ~ "10X")

&

The ability to "deliver" it

- (R&D output) → Product → Sales
- (Scientist) → Team → Company
- It's all about the money.
- *The idea (patent) itself is worthless*
- *A better "A" team with a "B" product...*

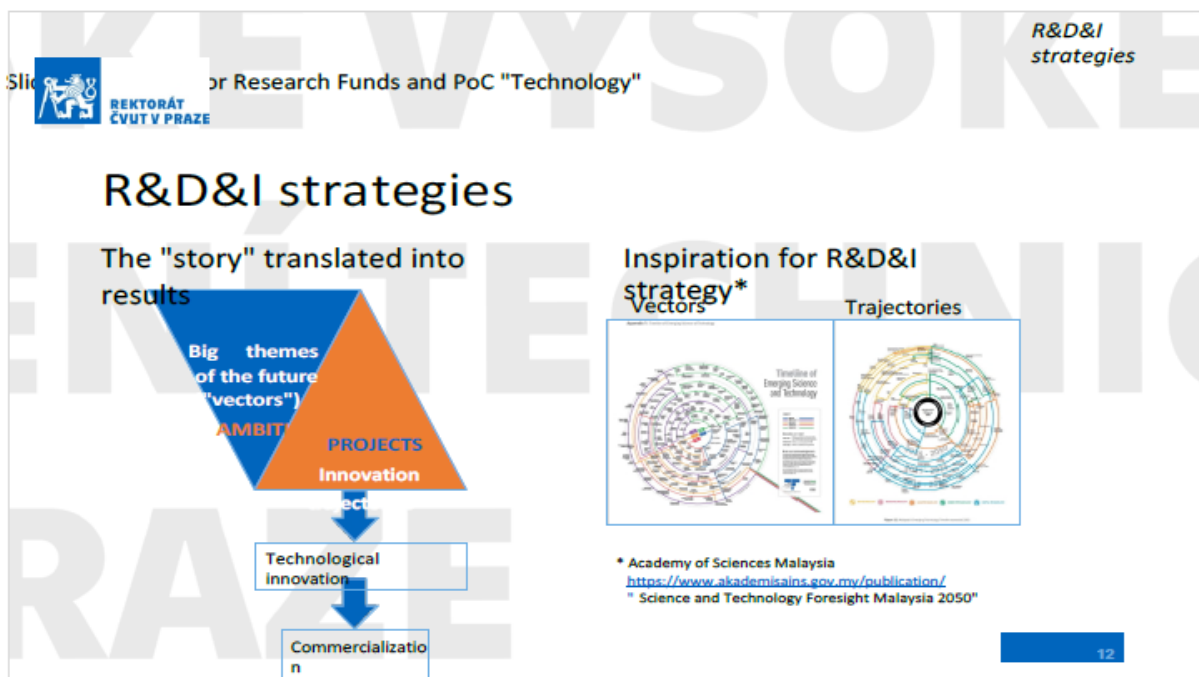
If the university cannot present relevant commercial results and wants to start reaching the target groups immediately, we need to change the approach: offer the ambition first (the goal, the "vector"), followed by the project(s) (the path, the "trajectory"). The vectors

are created from the top down and are based on the direction of the long-term development of knowledge, with a time horizon of 10- 20 years. They answer the questions "how (will) man travel, live, heal, look... in year XY" - the university must become more of a trend setter than a mere trend follower. The trajectories are created "from the bottom up" and go "towards" the vectors; they are based on CTU's competences in the given areas. The CTU strategy should ideally be set in the context of national and sectoral strategies and take into account the comparative (dis)advantages of CTU compared to other subjects (our strengths and weaknesses vs. the strengths and weaknesses of others).

In order to concentrate our efforts and investments, we need to limit the number of vectors to 3-5. This means that vectors will not be created purposely to "cover" every "component part" of the CTU. Ultimately, however, the higher the ambition, the broader the thematic scope of the vector, the greater the "interdisciplinarity", both within and outside CTU; not to get lost in the breadth of themes thus established is the "task" of the trajectories⁴.

The points on the trajectories are individual insights or innovations that must be achieved in order to move further along the trajectory towards the goal (a necessary condition, not a sufficient one); theoretically, multiple paths can lead to a single future point. Points on trajectories can also be "nodal" points, common to multiple trajectories. These points are theoretically the most valuable, and should therefore be the focus of our interest (and investment).

Slide 1: Accent on Research Funds and PoC "Technology"



⁴ The issue can be compared using the example of building the pyramids. The taller the pyramid, the wider its base must be. The pyramid is designed as a whole "from the top" (specifying how tall the pyramid should be), but in the end it must always be built "from the bottom".

Since private capital will push more than public capital towards a commercial outcome, we will have to make sure that the most capable ones participate in the "delivery" of vectors/trajectories, even if not all CTU employees or students are recruited. This is another reason that will force us to interact more with the world outside the university, both at home and abroad (research organisations and businesses).

9. VALUES "LIVED" IN COMMERCIALIZATION AND FUNDRAISING

All our commercialisation and fundraising efforts must be anchored in values against which we will measure all our actions and to which we can always return when deciding which direction to take, which of the available alternatives to choose.

i. Commercialization (incl. incubation / acceleration)

- money first
 - the account balance is decisive
 - it has to be "sold"
- "ownership" of problems
 - initiative, proactive goal orientation
- common sense
 - no grand theories, trinomial
- call things by their proper names
 - to go for the essence
 - "don't mash"
- decide/move/"push"
 - important vs. "only" urgent
 - better to get it wrong (the first time) than not at all
 - not to be afraid to make unpleasant decisions (e.g. not to proceed with commercialisation)
- simplify/standardise/automate

ii. Fundraising

- "infinity" of mission
 - the system is created "once and for all"
- input (in fundraising and fund management)
 - low cost
 - transparency (costs, powers, processes)

- on output (in the context of the provision of funds)
 - relevance, ambition
 - unpretentiousness, impartiality
 - evidence-based decision-making
 - agility (non-bureaucratic)...
 - ... vs. efficiency, effectiveness, "accountability"

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