



AMCHAM HUNGARY POSITION BRIEF No. X

RESEARCH & DEVELOPMENT AND INNOVATION

March 2012

AS A PILLAR OF HUNGARIAN NATIONAL COMPETITIVENESS

The main recommendations of AmCham:

Competitive taxation:

- Fixing tax rules in the long term.
- Structural diversification of R&D tax benefits by reducing direct operating costs.
- Implementation of limited employer contributions.
- Opportunity for preliminary evaluation of R&D activities; with binding decisions for the National Tax and Customs Administration.
- Maintaining the R&D tax benefits set in 2010 in the pharmaceutical industry.
- Gradual abolition of innovation contribution.

Efficient tender application system:

- Abolishing contra-productive jobs/positions and obligations connected to increasing returns from all R&D calls.
- Building schemes which encourage the establishment of global R&D competence centers.
- Significant reduction of bureaucracy related to R&D applications.

Innovative SMEs:

- A stable and predictable environment attracting venture capital.
- Creating special R&D&I solutions for SMEs.
- Speeding up registration procedures drastically.

Education supporting R&D:

- Making the vocational training contribution available to facilitate scientific, technological and information technology studies.
- Encouraging language learning, problem solving skills and creativity, and increasing the proportion of natural science subjects.

Foreword – Innovation is the engine of economic growth

In most cases, the result of successful research and development is an innovation, that is, a new idea, asset or method, which materializes as a new product that satisfies a social need. Nowadays research-development and technological progress, ultimately technological innovation has undoubtedly become the engine of development in advanced economies. Therefore it is essential for the private sector to be able to conduct research and development independently, and to create innovative products where innovation is determined by social, that is, market forces rather than the provisions of the state subsidy. Research and development involves a lot of risks for companies. In spite of the high costs, it often fails to result in new scientific knowledge, patentable solutions, or practically feasible and profitable products. Sometimes the regulations hamper the introduction of a new product (e.g. clinical trials new pharmaceutical products taking as long as ten years). Also, there have been many instances where a new product developed with a lot of effort was counterfeited soon after its launch. Finally, technological progress has speeded up so much that the greatest uncertainty factor for new technologies is represented by even newer technologies¹. It should not be a surprise, therefore, that most companies have an interest in reducing costs and risks. For that reason, the legal and regulatory conditions of research and development, which are among the factors to determine Hungary's competitiveness, have a special significance in relation to the sustainable economic development of our country. Enterprises need a predictable, fair and understandable regulation for prospering industrial research-development and innovation. In the Position Brief prepared by the Innovation Working Group of the American Chamber of Commerce, we summarize the most important questions that in our opinion are necessary to be dealt with in order for Hungary to become an attractive investment target country in this area. Based on proven international examples, we also make specific recommendations for settling these questions in our Position Brief. We believe that by implementing our recommendations Hungary's expenditure on research and development can be doubled. Although our Position Brief is not based on impact studies, its content is based on the extensive international experience of our member companies over many years. I thank the members of the Working Group for their contributions to this brief. Our special thanks go to Dr. Csaba Márkus, Director of Deloitte's R&D Division, and Dr. Judit Budai, Partner at Szecskay Law Office for their tireless professional support that made the formulation of our Position Brief possible.

*Dr. Lajos Reich
Chairman, AmCham Innovation Working Group*

AmCham's Innovation Working Group was established in 2011, with the objective to shed light on the role of research-development and innovation in the competitiveness of our country, to promote its contribution to recognition and increase of the Hungarian GDP, and to stimulate quick and efficient progress in areas of key significance. Its members are delegated by companies with international experience in research and development: Cisco Systems, Deloitte, Erős Ügyvédi Iroda / Squire Sanders (US) LLP, Flextronics International, Finext Startup, Flextronics International, GE Healthcare, GE Lighting, Genetic Immunity, Hárskúti Renewable Energy Center, iEurope Capital, Intel, Microsoft, NI Hungary, Pfizer, Szecskay – Attorneys at Law.

The preparation of the major parts in the taxation and tendering chapters of this Position Paper was coordinated by Deloitte consultants. The name Deloitte refers to Deloitte Touche Tohmatsu Limited, established as a "company limited by guarantee" in the United Kingdom, and the network of its member companies, each being an independent, separate legal entity (www.deloitte.hu). Deloitte provides auditing, tax, management, financial, risk management and legal advisory services in a number of industries, to state-owned as well as private companies. Through a network present in 150 countries, the nearly 170,000 experts of Deloitte offer their clients world-class professional services, which meet local needs and requirements.



Preamble

Following AmCham's Position Paper prepared in December, 2011, the Hungarian government has implemented several steps and presented plans to the investors that could have either a positive or a negative affect on R&D prospects of our country. We think we should reflect on these in the preamble.

We were glad to see that, in line with our earlier proposal, as of February, 2012, SZTNH (Hungarian Intellectual Property Office) has been authorized to evaluate R&D projects as requested by the companies, which decision is considered binding for NAV (National Tax and Customs Administration). We deem the availability of appropriate professionals for this authority is important so that the abovementioned evaluation indeed motivates the increase of corporate R&D investments.

We consider the significant increase of state-subsidized students majoring in information technology, natural sciences and engineering a big success. R&D can only improve with appropriate expertise. The fact that from this year on, 31,000 students - as opposed to the previous 21,000 - have the opportunity to study these majors is a great achievement to ensure stable, long-term provision of talent. However, the increased number of students will need 2 to 5 years graduate from university, therefore we urge that R&D centers have the possibility of fully leveraging the vocational training contribution for university education of their choice. However, according to the most recent decision of the Hungarian government, enterprises are obliged to fully pay this amount into the government budget. This is a great loss for the R&D sector, as the companies have lost an effective means to improve the supply of special expertise.

According to another recent decision of the government, from 2012, enterprises are not entitled to write off their costs from their innovation contribution. According to plans enterprises maintaining real R&D capacities can make up for the lost savings through tenders. Although we acknowledge and support the government's intention to clarify the system of writing off innovation contribution and to put an end to loophole abuse, we believe that this decision alone does not improve the competitiveness of companies in the long run and gives way to uncertainty. The net position of the winning companies will only be neutral at best, while new resources or solutions will not be incorporated into the system. In addition we continue to see attempts to force the maintenance of the headcount of entire legal entities in exchange for R&D subsidies, which is an uncompetitive condition in the current world economic situation.

We emphasize that in our opinion stimulation of R&D investments and creation of a great number of new R&D jobs is only possible considering our recommendations below.

I. R&D expenditure in Hungary may be doubled by involving the corporate sector

The European Union already recognized at the beginning of the millennium that the establishment of a value-added, knowledge-based economy is an engine of long-term competitiveness of EU member states – as well as that of the entire EU. It is for this reason that, practically all EU – as well as OECD – countries have increased their GDP proportional R&D expenditures in the past years, and made the conditions of R&D environment more attractive to companies.

Parallel to R&D centers playing a direct role in job creation, Hungary may facilitate its convergence to the successful knowledge-based economies of the EU and other countries through stimulating research and development and thus laying the foundations of a permanently competitive economic policy based on high value-added job creation.

The research-development and innovation (R&D&I) policy has for many years lacked a cohesive professional concept harmonizing the different subareas (incentive system, education, etc.), a consciously formulated regulatory environment, a system of definite

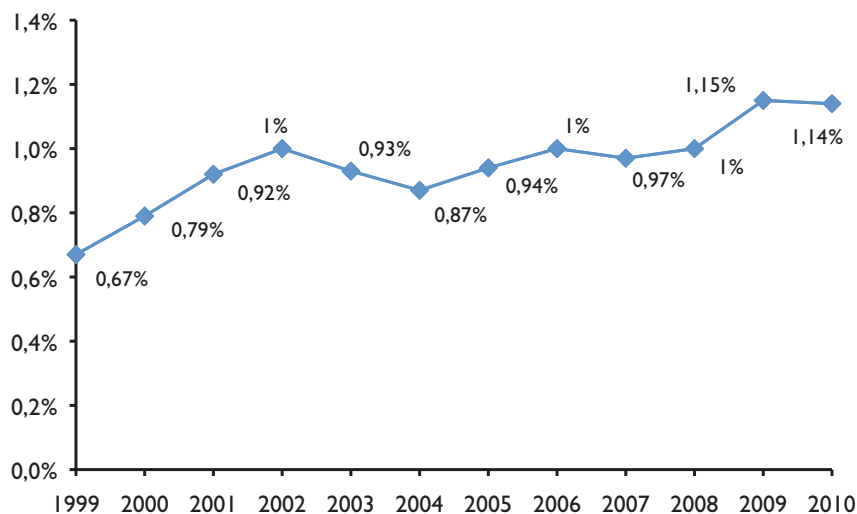
By stimulating research and development we can facilitate convergence

targets and the appropriate toolkit for implementation. All that is accentuated by an unpredictable regulatory environment which changes constantly, several times even within a year. Therefore it is not a coincidence that R&D expenditures have been around 1% of the GDP in the past decade, without a definite tendency of growth.

R&D expenditure has remained around 1% of GDP in the past decade

Fig 1.

Research and development expenditures in Hungary between 1999 and 2010 in percentage of gross domestic product (GDP) (source: KSH, Central Statistics Office)



However, the government's objective, formulated in the recent past, expresses the objective in the area of R&D for the next decade clearly: "...Hungary intends to achieve an increase of research and development expenditures up to 1,8 per cent of GDP by 2020, in a way that the proportion of corporate R&D spending increases within overall research and development expenditures...". Considering the expenditures of the past decade, doubling of GDP-proportionate R&D expenditures appears to be a brave and forward looking target.

The goal is to at least double GDP-proportionate R&D expenditure

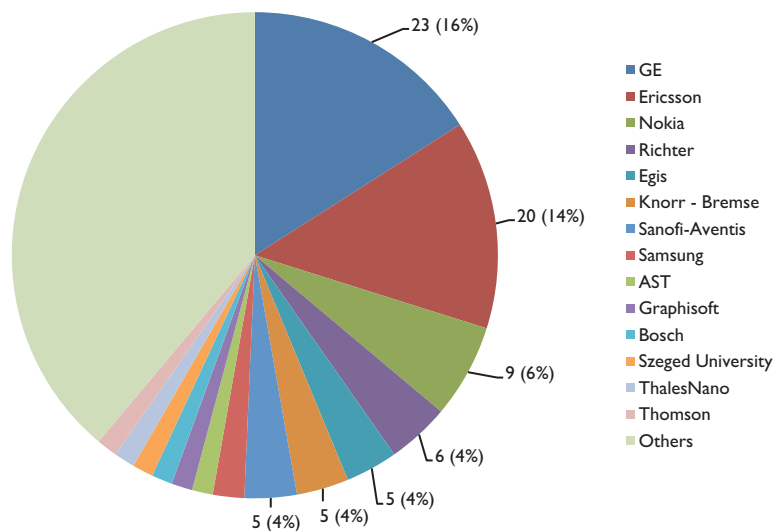
It is also stated by the government that this growth would be driven by corporate R&D expenditures, which has an indicative value. However, before the Government sets out to implement the strategic, legislative and institutional measures defined in the National Reform Program, it is important to take into account the conditions which companies consider before increasing their R&D expenditures..

The duration of barely ten years means that the emphasis should be put on factors which facilitate the increase of R&D expenditures in the next two to four years, resulting in steps towards the achievement of the 1,8% target.

The patent authority (USPTO) of the largest market of innovative products, the United States, issued 146 patents in 2011, which had at least one Hungarian inventor. One third of these 146 patents came from the Hungarian branches of merely two multinational companies: GE and Ericsson; but even the half of them were invented by the employees of only seven large companies: apart from the aforementioned GE and Ericsson, also Nokia, Knorr-Bremse, Richter, Egis and Sanofi-Aventis.

We have to focus on factors in which substantive changes can be quickly achieved

Fig 2.
Patents by Hungarian inventors issued in the United States (source: USPTO)



Most R&D activities are carried out in R&D&I centers of multinational companies

Nowadays not only in Hungary, but all around the world most R&D activities are carried out in the R&D&I centers of multinational companies. These centers outsource parts of their processes to university institutions (e.g. clinical tests of pharmaceuticals) or innovative SMEs (e.g. software testing), similarly to the processing industry, thus creating a certain type of competence network around the center. Therefore, in addition to the jobs created directly through larger R&D&I investments, a number of further related jobs are created indirectly due to the multiplier effect. Therefore **we recommend that the Government should launch a consultation program to convince the hundred companies with the largest R&D budgets in the world to establish an R&D center in Hungary.**

II. What are the criteria of choosing the location of corporate R&D centers?

Several international studies/comparisons have been published about the factors that influence the choice of location for the research and development centers of multinational companies³:

- A regulatory environment that is predictable and stable on the long term;
- The number of highly qualified R&D researchers and a continuous supply of new talents from educational institutions;
- Cooperation with universities and other companies, that is, access to the local scientific and technological community;
- Closeness, size and dynamics of the consumer market;
- Closeness of production/manufacturing;
- Size of R&D expenditures and the tendency of change;
- Transparency and extent of subsidies and tax benefits and access to them;
- Elaboration and enforceability of patent and copyright regulations.

III. Why would it be beneficial for Hungary to change the R&D regulatory and support system?

Is it necessary to attract the R&D activities and research and/or development centers of multinational companies to Hungary?

Literature and experience of the recent years offer conclusive evidence to that question:

1. A number of research and development activities, due to their nature, size, and complexity do not represent an available option to companies focusing on the national market, and to small and medium-sized enterprises. Therefore the only option for participation in research and development activities is to invite multinational companies to set up R&D activities in Hungary. The question, therefore, is not only whether or to what extent R&D activities are carried out in a given country, but also, at least as importantly, how forward-looking R&D activities are, in what sectors they are carried out, what chances innovations have in the world markets, and consequently to what extent they will contribute to increasing the country's competitiveness on the long term. **Therefore the nature and quality of R&D activities, as well as their effect on competitiveness, in addition to their size is also determining. Thus it is necessary to investigate what sectors and what types of R&D projects Hungary can be really successful in.**
2. Experience proves that **local knowledge transfer plays an important role in the R&D activities of multinational companies.** Similarly, as the establishment of multinational car manufacturers in Hungary, and their continuous growth are a precondition for the status of car manufacturing suppliers (or the achievement of an international supplier status) of Hungarian small and medium-sized companies, the R&D activities of SMEs, with the exception of a few domestic companies, will be undoubtedly stimulated by the cooperation with multinational companies that have a dominant position in their sectors. **The creation of large corporation R&D competency centers of international significance will thus as a result of multiplicative effect, result in the creation of further jobs through the cooperative innovative SMEs.**
3. The transfer or outsourcing of R&D activities of multinational companies has intensified in the past years. This trend, in need for cost optimization, was also reinforced by the recent economic crisis. **There are multinational companies that are currently planning the consolidation of their European R&D centers, that is, they are planning to concentrate their R&D activities in one or a few countries, and Hungary is among the target countries.**
4. The competition for the settlement of R&D centers of multinational companies is intensifying among countries; **several important European and non-European countries are planning to introduce or significantly modify their R&D incentive (support and tax benefit) systems.**
 - A few years ago, **France** significantly modified their R&D tax benefits system by taking the decision making factors of large corporations into account, and now several multinational companies, operating in Hungary as well, carry out certain R&D activities in France⁴. Within a few years, France achieved first place among OECD countries in terms of R&D tax benefits with a structure especially attractive for American companies.
 - **Poland**, where currently there are no considerable R&D tax benefits, is seriously considering the introduction of an R&D tax benefit system with the highest benefits possible, according to an extensive survey conducted in the recent past.
 - **Germany**, where R&D subsidies have already been significant, is examining the introduction of R&D tax benefits.
 - **The Czech Republic** has been continuously improving its system of R&D tax benefits.
 - **Finland**, one of the frontrunners in the EU as well as the OECD in terms of GDP-proportional R&D expenditures, is also considering making its R&D tax benefits more attractive.

The scale and quality of R&D activity and its effect on competitiveness is determining

The establishment of large corporation R&D competency centers will create further jobs due to its multiplicative effect

R&D investments of multinational companies can be realized in Hungary

If Hungary wants to keep pace, substantive changes must be considered

Several countries have thus appraised, recognized and calculated the quantified effects of making R&D support and tax benefit regulations more attractive, and if it is not Hungary's intention to fall behind in the race for R&D activities, then it is necessary to consider substantial modifications in the system of R&D subsidies and tax benefits.

IV. How can the tax benefits for Hungarian research and development be made competitive on a global scale?

The range of R&D tax and tax base benefits is wide ranging in Hungary, but the relatively wide range of benefits does not necessarily guarantee the existence of a well-functioning and attractive system, in respect of which our recommendations are as follows:

1. **We recommend the diversification of tax incentives related to R&D activities**, based on two pillars. We recommend that, while simultaneously maintaining the current regulations of the corporate tax deductibility of own R&D activities as well as contracted R&D services, the **benefit** related to R&D costs should be available not only by improving after-tax results, but, depending on the enterprise's own decision, also by **reducing direct operating costs by deducting a certain percentage of R&D costs from corporation tax**. If the enterprise achieves little or no profit in the reporting year, **the right of using the benefit should be extended to the following three years**. A crucial point of our recommendation is that **the state should refund the tax benefit in the third year under all circumstances**, if the enterprise is unable to fully write it off over that period. This way the enterprise can accrue the benefit as guaranteed income in the direct R&D cost center already in the reporting year, reducing the cost of R&D activity in the given year. This way the benefit would become independent of taxation, therefore it would be booked as a pre-tax item, in the direct cost center, in accordance with the principles of US GAAP and IFRS⁵. We recommend that **young innovative SMEs should have access to the benefit already in the reporting year**, rather than after three years, thus helping them preserve their liquidity in a period of development and market expansion.

Our recommendation would result in one of the most beneficial regulations in the world

Our recommendation based on the two-pillar diversification **would result in one of the most beneficial regulations** in the region, the EU, and **the whole world**, thus guaranteeing the competitiveness of R&D activities to the participants of the Hungarian economy, performed within independent as well as international processes..

The advantages of our recommendation are that

- it would favourably influence large corporation R&D investment decisions for our country;
- it would be much more beneficial for young innovative SMEs with no profit generated yet;
- it fosters the creation of independent R&D competency centers that do not perform trading activities;
- in the case of contracted R&D services it would not threaten the competitiveness of investments based on the current system of R&D benefits.

We recommend to introduce a suitably chosen cap for employer social security tax

2. **We recommend that** according to the rules that had been in effect originally for 2010, **the deductibility of R&D costs from special taxes should be maintained** in the pharmaceutical industry, stricken by special taxes while at the same time referred to as a growth sector. It is to be feared that the R&D investment calculations of the affected companies will lose their relevance due to the abolition of deductibility, raising doubts about the preservation of some of the pharmaceutical capacities set up in our country. This may result in a collateral damage of as much as billions of forints of additional funds vanishing from the academic, university and clinical networks taking part in pharmaceutical research, and the abolition of benefits with retrospective effect would not enhance the image of legal safety either.

3. One of the largest cost items of R&D activities is the cost of the salaries of highly qualified employees, which may limit the employment of appropriate number of experienced R&D professionals. Therefore **we recommend the introduction of a suitably chosen ceiling on the social security contribution paid by employers**, in the interest of the employment of R&D employees (including software and hardware developers). **That would not only promote the creation of**

highly paid R&D jobs, but also the establishment of regional or global headquarters in Hungary. In our opinion, such a benefit can be harmonized with EU rules related to state subsidies as well.

4. **We request that the system of R&D&I definitions be unified and made unambiguous** through the involvement of R&D participants, on the basis of the Frascati Manual⁶, in order to eliminate uncertainties and contradictions arising from future assessments of R&D activities. That would have the additional advantage of mitigating the unnecessarily exaggerated “self-censorship” of companies in fear of a follow-up audit by NAV (National Tax and Customs Administration) and so of the taxation risks, when accounting for R&D. That otherwise already existing R&D activity could then also be included in the total Hungarian R&D performance expressed as a percentage of GDP, thus directly contributing to the achievement of the 1,8% GDP proportional R&D expenditure target.

5. In case if doubts arise even after the unification and clarification of the definitions, we recommend, on the basis of foreign examples, that it should be stipulated by law that a department, organ or institution with appropriate expertise and experience, designated by the Ministry for National Economy, **should be entitled to issue resolutions to companies seeking advice in the process of using R&D tax benefits on whether certain activities qualify as R&D.** The same statute should stipulate within the framework of which **procedure** and by what **deadline** the responsible authority is obliged to respond, and if the company does not receive a response within a defined time period (e.g. 30 days), then acceptance (positive qualification) should be assumed, in accordance with the statutes of public administration relevant to cases when a public administration organ remains silent. Further, the resolution of this responsible authority **should be binding on the National Tax and Customs Administration.** Taking these proposals into consideration we welcome the government decree endowing the Hungarian Intellectual Property Office with the above recommended rights, which came into force on February 1, 2012. Hopefully these measures will enhance the efficiency of administration with continued expertise in the qualification processes of R&D activities.

We second to assign an institution which is entitled to qualify R&D activities

V. How can Hungarian research and development applications be made significantly more effective?

Based on the review of the R&D application system and the practical experience of the member companies of AmCham’s Innovation Working Group, we formulate the following recommendations:

1. A precondition for the continuous stimulation of R&D activities is the existence of a transparent, predictable support system. **Instead of brief invitations for applications with limited budgets and accessible only for a few months, it would be more effective to make comprehensive funds, suited for long term planning available,** even by combining schemes co-financed by the EU and those with purely domestic funding. Past projects completed by the enterprise successfully resulting in a new product or service on the market, should be considered an advantage when granting new R&D applications.
2. The regulations of the European Union relating to subsidies on research and development projects do not define what types of undertakings the beneficiaries can be expected to make in the case of subsidizing R&D projects – if the relevant member state expects any obligation to be taken by the applicant at all. On that basis, it is also left to the discretion of the member state if it should concentrate basically on incentivizing R&D processes, or establishing competence centers in the given country/region in the case of large corporations, or whether it should also stipulate the undertaking of other obligations that sometimes do not naturally follow from the R&D activity, similarly to regional investment grants.

It is expedient to offer comprehensive, long term funds

We recommend that R&D subsidies should focus on the R&D projects and processes themselves, rather than on expectations that can be typically related to investment projects. Hungarian application schemes supporting R&D often contain expected undertakings related to additional staff numbers or additional turnover. Those expectations are often hard to meet due to the nature of R&D projects.

In the case of revenue undertakings, one of the reasons for that is that **R&D projects do not always lead to the expected results due to the inherent risks of R&D, and so revenue may not be generated at all, or not within the deadline set out in the invitation for applications.** Although the R&D project is also completed in such cases with the involvement of the suitably qualified research staff, the related costs are incurred, and the project will typically serve as the basis for further developments in the future, but the expected undertakings defined in the invitation cannot be achieved in all instances. When managing such scenarios, it is important that, apart from the obligation to repay the grant, other opportunities should also be made available for the applicant, and even the maintenance of the assets acquired through the use of the grant, in accordance with the provisions of the EU, should be sufficient.

It is essential that the projects are realized in Hungary

Besides, in the case of large corporations that carry out R&D activities in the largest volume, **it often happens that another legal entity, typically within the group, undertakes to utilize the R&D activity, and so, although the project is completed successfully, the revenue from manufacturing during the implementation period will be realized by another company.** What is **most important**, in our opinion, from the perspective of R&D, is that **the project itself should be realized in Hungary**, as that will contribute to the retention and development of experts trained here, and if revenue is included among the assessment criteria, then it should be an undertaking optionally made for additional points.

Adaptability is the prerequisite of innovation

Additional or long term continuing employment obligations related to R&D projects also often cause difficulties. R&D projects are often carried out by project teams, unless a continuously operational development group is used, the composition of which (in terms of either direct employees or consortium partners, contractors) often changes in time depending on the type of project, and also in order to continuously maintain corporate innovation. Accordingly, the efficiency and realization of R&D projects is supported much more by the project, rather than process, approach, as the ability to adapt quickly is a precondition for innovation. Accordingly, the requirement of long-term undertakings related to increasing and maintaining staff numbers defined within a too specific operational frame (e.g. a specific company or a consortium the composition of which is not allowed to change) may exert a detrimental effect on innovation processes and skills, and ultimately on the creation of jobs as well.

It is essential to reduce the red tape of tendering processes

3. We recommend that a register should be maintained for R&D&I projects supported by public financing, and that the two databases accessible through the website of NIH (<https://nkr.info.omikk.bme.hu>, https://regiszter.nekifut.hu/ki_kereses/results) should be combined in a user-friendly way in order to facilitate scientific and professional cooperation and industrial utilization. We recommend that any research could be recorded in the database, subject to an obligation of updating by the data provider. We also recommend that the database should receive publicity, in order to facilitate contacts between publicly and privately financed market participants. For the implementation of a user-friendly design for the database, it is advisable to study the CONVERIS database established by the European Committee in 2004 (www.healthcompetence.eu), or the online innovation platform models already introduced in European regions with successful technological investments (such as the database of the autonomous community of Galicia in Spain, at www.vindeira.org/index.php/en-GB/la-plataforma-mainmenu-79.html).

4. The reduction of administrative burdens related to applications is especially important in the case of R&D projects. Obligations of too frequent reporting and documentation

draw resources away from the main activity, which large companies can cope with to a certain degree, but it makes it impossible for young innovative SMEs to access project grants. **Therefore we recommend the optimization of reporting requirements** as follows:

a. General reduction of bureaucracy:

- In the current application system, companies have to compile documents consisting of hundreds of pages, which the Hungarian Economic Development Center (MAG Zrt) and other cooperating organizations probably cannot process with their available capacities, while it is practically impossible to establish personal contacts with their staff. We recommend that instead – based on Japanese and several Western European examples – the submitted application should consist of not more than 10-20 pages, and, on the basis of such applications, an expert committee should decide on the acceptance of the application during a verbal hearing following a preliminary screening.
- The controlling regulation of subsidy utilization should be defined by a public code so that the beneficiaries can prepare and fully meet the expectations.
- Instead of collecting the certified, manually signed and stamped copies of all individual invoices, we recommend that summarized reports should be accepted and randomly checked, similarly to tax returns.
- Large companies with several sites/divisions should be allowed to perform applications and data recording by site.

The length of tender applications should not exceed 10-20 pages

b. Proposals related to the reduction of administration in connection with the taxation environment:

- If the “no public overdues” database is accepted, there should be no need to request the “free of overdues” certificate for each account settlement request submission.
- It should be made possible to submit document packages electronically with the introduction of the electronic signature (at least in the case of smaller, simpler payment requests), as an alternative to the obligation of signing countless pages of paper.
- We recommend that vocational training contributions should be recorded in an electronic database, regarding the fact that companies have to pay them subsequently, while the presentation of the balance of the current period always poses problems when submitting payment requests.
- The electronic acceptance of the declaration by type of tax, linked to the “no public overdues” database, would provide quick and unambiguous information about the payments and receipts of the company.

The controlling regulations of subsidy utilization should be public

c. Administration of human resources:

- In connection with employer payments in cases when the company outsources the payroll function, consideration should be given to the possibility of simplification by accepting as sufficient documentation the outsourcing frame agreement containing the provisions relating to the payment, besides the document issued by the payroll service provider certifying the payment. Then there would be no need to attach the separate bank statements of the company in addition to the documents of the payroll service provider.
- Acceptance of the hour registration system available in the given situation, so that there should be no need for the engineers working on the project to keep and track several different time registration records, generating unnecessary bureaucracy, while the government’s objective is to reduce the administrative burdens.

d. Other administrative processes:

- Currently it is necessary to submit all company documents and direct debit authorizations for all applications. In our opinion, it would be sufficient to submit only the modifications in effect, and the details of the signatories of the given business division, as the issuer of the application already has all other details of the company.

Documents should be submittable electronically

There is a need for transparent and objective criteria

Schemes promoting global R&D competence centers would be attractive

- In respect of NFÜ (National Development Agency) and MAG Zrt., we believe that it is important to restructure the project partner system so that preliminary assessments and/or discussions could take place in relation to all areas in connection with the project (e.g.: communication, payment request, progress records).
- The provision of Internet based access to insufficient data corrections and documents, in order to make the exchange of information and the provision of data more efficient and quicker. The necessary conditions for that are already in place, as there are password protected communication web interfaces (e.g.: EMIR (Unified Monitoring Information System) and "Ügyfélkapu" ("Client Gate")).
- The introduction of a simplified tendering system for companies that already have a tender history would ease the burdens of the state as well as the companies involved, it would make it possible to eliminate the submission and assessment of contract and type modification requests during the grant period.

5. Similarly to the already widely established practice applied to grants co-financed by the EU, it would be important to make the assessment criteria of all domestic tenders appropriately transparent and objective as well. **It is also important to ensure that the evaluators involved in the professional assessment should be independent.**

6. **We recommend that software development should be recognized as an R&D activity in all tenders within the Science – Innovation Program of GOP/KMOP (GOP: Economic Development Operational Program; KMOP: Central Hungary Operational Program).** For instance, in the GOP I.3.1 tender designed especially for innovative SMEs, no grant may be provided in relation to a project the only result of which is software, which is at least unjustified, in light of the successful software innovations of recent times. **It is also important to include infrastructure components required for software development among eligible costs** – naturally, only equipment needed, as supported by documentation, for specific R&D work processes should be eligible.

7. **Instead of consortium projects, it would be necessary to ensure that projects carried out on a contracted basis,** with the involvement of SMEs and high education institutions, research locations, **can be subsidized.** That would facilitate the process of project realization on an operational and technical-administrative level, while at the same time it would generate cooperation with the same value.

8. **The development of schemes promoting the establishment of R&D competence centers with a global significance would also be an attractive solution.** With the application of such schemes, funding should be made available continuously for the establishment of complex centers by attracting companies to Hungary, rather than for smaller projects.

VI. How can Hungary's patenting system be made more attractive?

The time and cost of obtaining patent protection, the effectiveness of enforcing claims against patent infringement, and the regulation of fees owed to the inventors of service inventions, can influence R&D activities.

The Hungarian regulation related to intellectual property complies with the provisions of the TRIPS Agreement⁷ and the current community regulations (Enforcement Directive). When making our recommendation, we pay consideration to the fact that industrial law protection activities are carried out in a centralized way in the practice of multinational companies, independently of the fact that R&D activities are performed in different countries. In respect of obtaining protection, the earliest possible registration is in the interest of the applicant. That is justified by the fact that it is not possible to take action

against infringers in Hungary before obtaining the protection. Although an infringement suit can be filed on the basis of temporary protection acquired through the publication, but the law suit will be suspended until protection is granted. Due to the delay in registration, it is not known what conflicting patents are to be expected. The application becomes known upon publication, but the scope of protection with which the patent is granted will be found out only after the registration process, which causes uncertainty for the companies involved. Companies, especially those striving for success on international markets, aim not only to obtain patent protection in Hungary, but also submit European patent applications, and/or initiate PCT (Patent Cooperation Treaty) procedures (with the same priority). It needs to be pointed out that a significant change can be expected in the patent system in respect of the EU member states, due to the introduction of unified patents based on enhanced cooperation. Patents have until now provided national protection (European patents also break down into “packages” of national applications), while it will be possible to obtain unified patent protection in countries participating in the enhanced cooperation. Primary application in Hungary can thus be made effective in the whole of the European Union.

Primary application in Hungary could be encouraged, if the fee were lower and/or the procedure were much quicker than, for instance, in the cases of EPO (European Patent Organization), USPTO (United States Patent and Trademark Office), or other patent applications. However, the time needed to obtain protection in Hungary is usually 6-8 years. Other patent offices also often have significant backlogs. For instance EPO and USPTO registrations usually take at least 3-4 years. **In order to make primary applications in Hungary attractive for companies, we recommend – based on the examples of the quickest offices (Korea: 1 year, Sweden: 2 years) – that registration time should be reduced to 1-2 years, which would diminish one of the uncertainty factors of R&D activities, especially in the case of young innovative SMEs.**

Patent registration time should be decreased to 1-2 years

In order to increase the effectiveness of patent and copyright enforcement (e.g. in the case of unauthorized use of software protected by copyright) – and action in accordance with competition law against the same type of practice (unfair business practices, breach of business confidence, passing off) –, we recommend that it should be possible to pursue litigations started on more than one legal bases (protection of intellectual property and unfair competition together) before one court. Currently, the industrial property rights council of the Budapest Metropolitan Court has exclusive competence in matters related to industrial copyright infringements. However, it is often the case in such matters that the claimant is compelled to justify their claim on the basis of some other, intellectual property or competition rule infringements as well, which may be necessary if the defendant in the meantime submits a request to the National Office of Intellectual Property for the annulment of the patent in question. On the other hand, judgments on intellectual property and competition related claims fall under the competence of county courts (that is, the Budapest Metropolitan Court has no exclusive competence in these issues), therefore competence is primarily determined by the registered address of the defendant. It follows from the above that, if the registered address of the defendant is in Budapest, then the Budapest Metropolitan Court can not judge the competition and the intellectual property related claims concerning the same practice, and, further, if the infringement is committed by more than one defendants with registered addresses outside of Budapest, then the claim can not be enforced in a single procedure. **In order to increase the efficiency of legal action against intellectual property and competition related infringements – with regard to the cost-benefit aspects of litigations –, we recommend that the Budapest Metropolitan Court should have competence over judging the competition (Act on the Prohibition of Unfair and Restrictive Market Practices, sections 2 – 7) as well as intellectual property aspects of the claim, besides the industrial copyrights protection claim, in one procedure.**

One single court should be enabled to process cases involving more claims

The Budapest Metropolitan Court should judge the competition and intellectual property aspects of a claim in one single procedure

The advantage of our recommendation is that the judgment of further claims would not result in an increase in the number of cases handled by the Budapest Metropolitan Court,

as it proceeds in the case concerning disputes over industrial copyrights anyway. A further advantage is that situations of different courts proceeding in what is in essence an identical case, at the same time simultaneously could be avoided. In the absence of the necessary experience, the different courts may make decisions that are not sufficiently substantiated, or even decisions that are different from one another, while the Budapest Metropolitan Court has accumulated significant professional experience in relation to special intellectual property cases.

Further than that, in connection with the effectiveness of intellectual property and patent rights enforcement, AmCham's Innovation Working Group supports the cooperation between AmCham's Anti-Illicit Trade Commission and the National Board against Counterfeiting for the modification of the enforcement law in order to reduce the significant loss in time arising in the course of enforcing court decisions.

VII. How can education support R&D more effectively?

It is vital for companies carrying out R&D activities to secure the availability and future supply of scientific, technological and IT staff professionals with academic degrees. That is why it is very important that educational policies should take industrial expectations into account.

Industrial expectations should be taken into account by educational policies

The number of lessons in natural sciences should be increased and creative, problem-solving thinking should be enhanced already in the public education over the longer term. **The number of students** pursuing studies at faculties of **natural sciences, engineering and information technology should be increased.** It is important to integrate profession-specific studies in the syllabus.

At the same time, **the current situation characterized by the lack of professionals can be improved upon by the targeted optimization of the regulation concerning the vocational training contribution.** One of the original objectives of the vocational training contribution was to create the necessary funds for developing a training system that adapts to the needs of enterprises, is flexible and differentiated, and promotes the dynamic development of the economy. The institution of the vocational training contribution allows enterprises to use one part of the contribution for the training of their own employees, and another part for subsidizing the asset purchases of selected educational institutions. However, the current regulation of the vocational training contribution does not satisfy the objectives of the law from the perspective of the R&D sector, partly because R&D employees typically graduate from universities, rather than vocational schools, with MSc and PhD degrees, and partly because the law does not allow institutions of higher education to use the vocational training contributions paid by companies for the payment of the salaries of their teachers.

Quick improvement could be achieved if vocational training contribution is freely leveraged to nurture R&D talent supply

Therefore we recommend that the full amount of the vocational training contribution should be available for the financing of sections of higher education that support the R&D activities of companies, and secure the expansion and future supply of professional staff, including the financing of the purchase of equipment, salaries and travel costs of teachers and visiting professors, and special scholarships or fellowships.

We also recommend that in addition to the mainly supported higher education programs, companies should have the option, at their own discretion, to use a smaller part of the vocational training contribution for supporting elementary and secondary school programs aimed at the popularization of science, technology and information technology.

The advantage of our recommendation is that it leads to significant results with small changes. The above solution does not require significant state funding, as 60% of the vocational training contribution has been available until now as well for spending at the company's own discretion (although not in a way that supports R&D activities).

VIII. How can innovative SMEs be subsidized?

Most of Hungary's R&D activities are carried out in the research centers of multinational companies, or in research institutes maintained by the state, the participation of SMEs is low. At the same time, it is a vital interest of the country that SMEs should be able to connect to global value chains, because, as a result, the number of domestic jobs and the domestic added value could be increased.

We recommend that, if the conditions for the tax refund described in point III.1. are met, young innovative SMEs should receive it already in the given year, rather than three years later, in order to help them preserve their liquidity in the period of development and market expansion, when no profits are generated.

We recommend that the state should support, with special applications or financing, the establishment and long term operation of innovation centers that promote the activities of young innovative SMEs by lending professionals who are knowledgeable about instruments and measurements, at favorable prices.

We suggest that the introduction of a type of SME voucher system should be considered, which would enable domestic SMEs to use the services of non-profit or for-profit R&D knowledge centers. Examples for that can be found in the Czech Republic, Spain or the United Kingdom, where knowledge intensive SMEs are entitled to receive such vouchers, if at least half of their employees have academic degrees.

Finally **we recommend that the state** should create, with the aim to promote open innovation, a durable and predictable regulatory system that will unequivocally encourage enterprise to launch long term research and development projects and to spend on innovation. The state **may even facilitate the launch of an incubation program,** with thoroughly planned special applications or other means of financing, which would provide the opportunity for small startup companies with an innovative idea, but no company management know-how yet, to take hold. Examples for that can be found in several places, such as the Foundation model of INCYDE in Spain (www.incyde.org/en/default.aspx), where that service is provided by a state owned participant. **It is advisable to assign the configuration of such incubation houses to participants with the appropriate skills and references,** who can provide not only the site, but also the bookkeeping, taxation, legal, business development, marketing and management services to enterprises settling there. It would be useful to develop schemes in which **companies with a knowledge of global, or at least regional, markets guarantee the operation of such an incubation house,** and participate, as an invited board member if need be, in decision-making. It is advisable, of course, to let incubation houses function fully on a market basis on the long term, without direct support from the state (by incentivizing the involvement of venture capital, for instance), but it is important that the build-up of domestic innovation by small enterprises should be given an impetus in the initial phase through a scheme that is at least partially supported by the state. However, the best examples can be found in places where incubation houses were created by the private sector. Several good examples can be found in California (www.plugandplaytechcenter.com; www.ycombinator.com; www.idealab.com), which function on a business basis, without state support. We emphasize repeatedly that a stable environment and a predictable taxation policy is needed for that.

It is of vital interest that SMEs are able to join global R&D value chains

The state should establish long lasting and predictable regulations

Young innovative companies may gain a foothold through an incubation program

Footnotes

¹ Nathan Rosenberg, Innovation and Economic Growth, OECD.

² The National Reform Program of Hungary (NRP), which lays the foundations of the execution of the Europe 2020 Strategy, April 21, 2011, page 21

³ Chiara Criscuolo, Design and Evaluation of Tax Incentives for Business Research and Development, Annex I - The Effect of R&D Tax Incentives on location of R&D Investment, OECD

⁴ It is not a coincidence that while France took the 10th place, behind Hungary, in respect of R&D benefits per 1 USD in the 2005 survey of the OECD (OECD, Science Technology and Industry Scoreboard 2005, chapter A.12, page 37), it leapt to the 1st place in the survey prepared 4 years later (OECD, Science Technology and Industry Scoreboard 2009, chapter 2.14, page, 79). In the meantime, however, Hungary slipped back to place 12 from place 8.

⁵ The term US GAAP (United States Generally Accepted Accounting Principles) denotes a set of accounting standards used in the United States, while IFRS (International Financial Reporting Standards) are used in the EU (Wikipedia).

⁶ Frascati manual: the OECD organized a meeting for national experts of the statistics of research and development (R&D) at Villa Falcioni in the Italian town of Frascati in June 1963. The first official version of the document is titled The Proposed Standard Practice for Surveys of Research and Experimental Development, which became publicly known as the Frascati Manual (National Innovation Office)

⁷ Agreement on Trade-Related Aspects of Intellectual Property Rights