

# Carnegie Mellon University

## Industry's Guide to Working with Carnegie Mellon University

### Introduction

Carnegie Mellon University's first-class faculty, staff and students perform cutting-edge, world-changing research that is not limited by the bounds of departments or fields. Our strong, interdisciplinary focus produces truly innovative results with applications in a variety of fields.

Collaboration with Carnegie Mellon offers industry sponsors more than just access to excellent research and talented future employees; it offers a unique opportunity to partner with a world leader in innovation.

Carnegie Mellon's Office of Sponsored Programs (OSP) is here to provide comprehensive support to faculty and staff in building university-industry research relationships. One of OSP's most critical roles is negotiating research agreements with industry sponsors. To that end, OSP's contracting team brings to the table proactive and creative solutions to common problems that may arise during the negotiation phase that address the business needs of the industry sponsor while safeguarding Carnegie Mellon's mission to create and disseminate knowledge through research.

The purpose of this guide is to provide information about the unique aspects of the university-industry sponsored research relationship in an effort to increase the likelihood of future successful and mutually beneficial collaborations.

### *The Benefits of Working with Carnegie Mellon*

Companies have historically relied on Carnegie Mellon for access to expertise and research that spur innovations, extend their resources, and sharpen their competitive advantage in the marketplace. These relationships provide industry interaction with new and emerging science, technologies and approaches to problem-solving, experts who are scientific leaders in their fields of interest, and access to specialized equipment and laboratories. In addition, such sponsored research projects provide industry partners contact with Carnegie Mellon's students, who are potential future employment recruits.

## *Understanding Industry's and Higher Ed's Goals*

As a nonprofit, tax-exempt 501(c)(3) organization of higher education, Carnegie Mellon's primary goal is to create and disseminate knowledge. By comparison, companies understandably seek to achieve corporate goals of developing products and services that will serve the needs of their customers, and increase shareholder value through growth and competitive advantage.

Bridging the gap between the respective goals of higher education and industry is essential to forging a successful relationship. Acknowledgement and respect of their distinct cultures and perspectives will help ensure that the sponsored research contracting process is not derailed. Every year at Carnegie Mellon, corporate sponsors and our researchers participate in many research projects, the success of which is largely due to the parties' careful balancing of their respective interests and cultures.

## *Managing Expectations*

In addition to the practical differences in their goals, a recognition of common attributes of industry and academia help manage partner expectations.

***Understanding the Relationship.*** A potential obstacle to establishing a university-industry research relationship is the parties' disparate views of the fundamental objective of the alliance. A university's driving goal is to create a collaborative environment open to the free exchange of ideas so that research, creativity, innovation and entrepreneurship can flourish. Conversely, a company may view the relationship as a means for facilitating the purchase of tangible deliverables or services.

The most successful research partnering between industry and academia recognizes the benefits of mutual learning and knowledge transfer, while enabling a path to commercialization of research innovations arising from the relationship. It has been our experience that a traditional "customer-vendor" model with our industry partners does not support these goals.

***Timing and Outcomes.*** By its nature, academic research is unpredictable, and specific results cannot be guaranteed within a certain timeframe. It is difficult to forecast if, or when, a particular innovation will occur. Consistent with its 501(c)(3) mission, the university performs basic research through prototype stage, and it does not produce commercial products.

Industry is often timeline and deliverable-driven. As a result, companies may expect specific intellectual property or deliverables to become available by a set date. Stated another way, universities focus on the research, itself, while industry is looking for a prompt return on its investment.

Given the university's mission and the uncertain nature of research, Carnegie Mellon works with its industrial sponsors to formulate a mutually agreeable scope of work and expected project deliverables.

***Confidentiality and Publication of Research Results.*** The academic mission of Carnegie Mellon is to create an environment which promotes the free exchange of ideas and facilitates the dissemination of knowledge. This mission requires members of the university to be able to publish research results in a timely manner.

Conversely, companies place significant economic and competitive value on maintaining trade secrets and proprietary information. Thus, industry partners may be comfortable sharing information only internally or under non-disclosure agreements on a need-to-know basis.

In situations where the parties believe it is necessary or desirable for the sponsor to provide its confidential information to Carnegie Mellon for a project, Carnegie Mellon can agree to confidentiality terms for such information, provided that it is marked or identified as confidential or proprietary. However, Carnegie Mellon must have the freedom to publish its research work product, subject to a limited review and comment by the sponsor as described below.

During the term of the project and for a limited time afterward, the university can offer sponsors a pre-publication review period (up to 30 days) for project reports and papers. During such period, the sponsor would have the opportunity to review the proposed publication and (i) request deletion of any confidential information belonging to the sponsor that had been provided to the university for the project and inadvertently may have been included therein; and/or (ii) request a limited delay (typically no more than 60 days) in publication to allow time for the sponsor to file patents or other intellectual property protection regarding any intellectual property in which the sponsor has an ownership interest. The review process does not cover student theses or dissertations, since the university cannot delay a student's completion of academic requirements (though the students would remain subject to any applicable confidentiality requirements for sponsor confidential information).

Aside from the basic academic concerns raised above, accepting publication restrictions beyond the limited review period would cause Carnegie Mellon to lose the benefit of certain important exclusions under U.S. export control laws and regulations, such as the fundamental research exclusion. If the fundamental research exclusion applies, it means that the work is not export-controlled and can be freely published. Without the exclusion, the work may be subject to certain export controls, which means that non-U.S. persons at Carnegie Mellon may not be able to access the controlled information or materials unless and until they are granted an export license or an applicable exemption applies. This would significantly restrict the involvement of, and the dissemination of information to, Carnegie Mellon's many foreign personnel and students and to the public at large.

Because of Carnegie Mellon's open campus environment, Carnegie Mellon intends to

perform only fundamental research on its campus, and it expects to restrict any export-controlled work to certain off-campus facilities equipped to handle such work. In order to support both parties' compliance with the relevant export control laws and regulations, as described in the Export section below, Carnegie Mellon expects that sponsors will coordinate with Carnegie Mellon in advance before providing any export controlled materials to the university for use in a project.

***Ownership of Work Product.*** For a number of reasons, it is important that Carnegie Mellon retain ownership of intellectual property and other materials created by it in the performance of research.

As a tax-exempt organization, Carnegie Mellon is expected to use its resources to perform activities related to its exempt purposes. As such, Carnegie Mellon is not supposed to use its resources (e.g., money, personnel, intellectual property, facilities) to provide "private benefit" to individuals or entities.

In addition, Carnegie Mellon must comply with relevant rules relating to its use of tax-exempt bond financing. Carnegie Mellon has used such financing in the majority of its buildings and is subject to specific rules concerning an exempt organization's use of tax-exempt bond financed facilities. While corporate sponsored research may be conducted in such facilities, the university must own the work product developed in those facilities, and may only offer a license to the corporate sponsor under certain parameters discussed below.

There are important reasons why Carnegie Mellon retains ownership of the work product created by its personnel under sponsored research agreements and does not engage in "work for hire" types of agreements that are typical for for-profit companies:

- To ensure that faculty are not blocked or otherwise prevented from continuing to perform research in their areas of interest;
- To fulfill obligations it has under federal regulations and its tax-exempt mission to disseminate knowledge and information;
- To fulfill obligations under the Carnegie Mellon Intellectual Property Policy and federal regulations for the sharing of royalties with inventors; and
- To comply with relevant tax-exempt bond rules.

***Use of the Project Deliverables and Licensing.*** The university appreciates that from an industrial sponsor's point of view, asserting ownership in intellectual property is a way to protect its competitive advantage and assure that proprietary information is not disclosed. Carnegie Mellon understands that the issue of the university maintaining ownership of intellectual property can be a concern for companies who are accustomed to work-for-hire arrangements. However, to address the sponsor's commercial needs and objectives, the university works with its participating faculty and the sponsor to determine mutually agreeable commercial licensing opportunities for intellectual property developed on the

project.

Research agreements usually include an internal, non-commercial review and evaluation license grant for project deliverables developed under the project. In addition, the university typically provides its sponsors with formal written disclosures of all intellectual property developed under the project, along with an option period (normally 180 days) to decide if the sponsor would like to pursue the available commercial licensing opportunities for such intellectual property.

Commercial licensing opportunities available to the sponsor could include non-exclusive and/or exclusive licensing opportunities, depending on the project. The licensing opportunities applicable to a project are agreed upon in advance by the sponsor, the university, and the university faculty involved in the project and are set forth in the research agreement.

Any desired commercial licenses are typically granted in a separate written license agreement between the university and the sponsor. The license fees or royalties for those licenses will be based on fair market value determined at the time of the license, unless the parties agreed to pre-set the commercial license fees as part of the research agreement. The university's ability to pre-set license fees is limited in circumstances where the project will be performed using any facilities financed with tax-exempt bond financing. In such cases, the university is not legally able to pre-set the cost of any exclusive licenses, and the pre-set value for a non-exclusive license would need to be offered to any other party who receives a non-exclusive license to the same intellectual property.

***Warranties and Indemnification.*** Companies are accustomed to entering into agreements containing standard representations and warranties, and provisions allocating risk between the parties. However, Carnegie Mellon (like other universities) performs research and makes its results available on an "as-is" basis with no warranties of any kind. Likewise, the university does not contractually agree to defend and pay for any claims that may result from a sponsor's use of Carnegie Mellon's work product.

Because Carnegie Mellon is a nonprofit organization, it does not have a pool of profits to support any warranties and indemnification obligations. In addition, Carnegie Mellon is performing research, rather than being engaged to produce a commercial-ready product. Thus, it is not in the position to offer these kinds of clauses that are generally offered by for-profit contractors.

Likewise, Carnegie Mellon does not have the resources to bear the risk of lawsuits or other claims resulting from a sponsor's commercial licensing of Carnegie Mellon's intellectual property. Since the university retains ownership of its intellectual property, it is likely that Carnegie Mellon would be named in any lawsuit relating directly or indirectly to the use of such intellectual property even where the claim is based on some activity of the sponsor. Accordingly, as a nonprofit organization, Carnegie Mellon

requires the sponsor to indemnify the University for claims arising out of the sponsor's commercial licensing of intellectual property received from the university.

***Export Control*** Carnegie Mellon asks that its sponsors not provide the university with any export-controlled information or materials to use in connection with the research project unless the sponsor has notified Carnegie Mellon that it would like to do so and makes prior arrangements with the university. Our sponsors (rather than Carnegie Mellon) are in the best position to know the export-controlled nature (if any) of any information or materials they plan to provide to the university,

The University is an open campus and has many faculty, staff and students who are not U.S. citizens or permanent legal residents. Carnegie Mellon does not perform export-controlled work on campus or restrict its research projects to only U.S. citizens. Therefore, the university generally does not want to take receipt or access to export- controlled information, particularly if it was intended to be somehow incorporated into the work product.

However, there may be occasions where it could be helpful for Carnegie Mellon's researchers to review certain export-controlled information in connection with a project, or where the parties have agreed to conduct a project that will be export controlled. In those instances, Carnegie Mellon may elect to arrange for certain of its researchers to access the information and/or perform the project, as applicable, in a designated off campus location.