# Collaboration Metrics (2021)

For many companies and universities, it can be exceedingly difficult to identify compelling metrics that effectively convey the value (or return on investment) and quality of university-industry collaborations.

This Quick Guide seeks to outline the metrics that representatives from a diverse set of UIDP member organizations have identified as **measurable** and **useful** for evaluating individual university-industry partnerships.

This list can be used by department or office managers to determine which metrics should be tracked and by managers of specific university-industry partnerships to evaluate whether the relationship is expanding, contracting, or plateauing. The metrics listed drive individuals. These include numbers that professionals apply to make decisions, and, in some cases, that are used to judge their job performance. (For a list of metrics that are mapped to specific job roles and responsibilities, see *UIDP Comparing Internal Structures Guide*.)

# How to Select and Use Collaboration Metrics

## Purpose and Scope

This Quick Guide provides a menu of more than 100 different metrics. While all the metrics listed are used by at least one UIDP member organization, no organization employs all of them. (See *UIDP Webinar: Harris Innovation Office Metrics Discussion*, for an illustration of how one company selected which metrics to use.) Tracking every single metric is not the most valuable use of this list. Rather, the advantage of using metrics arises from the conversations between partners about one another's goals and where they wish to measure value in the partnership. For strategic decision making, metrics need to be obtainable and measurable by the organization using them. For a whole host of reasons, ranging from long timelines to decentralized databases and indirect reporting methods, the numbers that would ideally be measured may not be available to the decision makers at a particular organization. It may also be valuable for the collaborators to discuss which metrics may be available to share with each other.

Additionally, the perceived value and importance of each metric is likely to vary based on perspective. Often, individuals assume that the most important metrics for evaluating an overall university-industry partnership are those that they already track and use to appraise job performance.

## Using U-I Collaboration Metrics

**Identify what is most important for each organization.** The priorities of every industry and university partner are different.

**Identify the collaborations that are most valuable to track.** These could be the organizations that you consider to be your current strategic partners, organizations that strive for strategic partnership, or those of the highest interest to your organization's leadership.

**Begin tracking and aggregating metrics over time.** There are many data visualization tools that can be employed to import statistics from a variety of sources and export a visual output. Generally, collaborative relationships are multifaceted, and more meaningful decisions can be made by creating a holistic picture of the partnership as opposed to focusing on a single metric.

**These metrics may be used as a training tool when working with a new partner for the first time.** The metrics may be used to inform talent acquisition; create benchmarks, dashboards, or scorecards; and develop a clear picture of the complete relationship between university and industry partners. The metrics can help establish "standards" for universities and industries to use throughout their relationships.

### Key Learnings:

» **Metrics do not tell a full story.** To be useful, an organization (industry or university) needs to identify which metrics are most important to a partnership, and then find a way to track, weigh, and visualize the results.

» **When building a strategic partnership, the collaborative activities may go beyond spending.** For example, collaborations may include curriculum development, student capstone projects, or co-op opportunities. These activities, among others (outlined in the UIDP Partnership Continuum), contribute to a stronger workforce pipeline and are indicative of a strategic partnership, in which both industry and university partners seek to address joint goals.

» **Relationships can expand, contract, or stay at the same level.** Trends in spending or hiring can be more telling than just the level of the metric.

» **Consider the duration over which metrics are evaluated.** The time period for measuring the metric must be chosen carefully to be relevant to the stakeholders and project.

# List of Metrics

The following list of metrics is disaggregated in different ways. First, the metrics that companies said they track (or would like to track) are listed separately from the metrics identified by universities. The two lists tend to be analogous with similar activities being evaluated by each partner in slightly different ways. These lists are presented side-by-side to make it easier for individual organizations to select the metrics most valuable to them (regardless of whether the organization is a company or university).

When considering the list of metrics, it is important to recognize that there is no single metric that will tell the full story of a U-I partnership. To be useful, an organization (company or university) needs to identify which metrics are most important and find a way to track, weigh, and then visualize the results. (For an example of visualizing metrics, see UIDP Webinar: Collaboration Metrics [minute 21]). When aggregated, the metrics listed below will provide better support to determine either:

- a picture of a successful strategic partnership that should be nurtured,
- a strategic partnership that has opportunities to grow, or
- a relationship that has not reached—and perhaps should not reach—a strategic level.

| University | Company |
|---|---|

### Strategic Partnerships

| University | Company |
|---|---|
| • Number and diversity of ways that the company is engaged with the university (research, student engagement, philanthropy, curriculum development) (see UIDP Partnership Continuum)<br>• Total sponsored research dollars from the company<br>• Number of unrestricted research funds (gifts, grants, or other funds from corporate foundation)<br>• Number of non-research philanthropic dollars<br>• Ratio of sponsored research to research gifts to non-research philanthropic dollars<br>• Number of master agreements and associated task orders<br>• Number of joint inventions<br>• Change in percentage of total university R&D dollars that come from the company (last year compared to this year) | • Total investment in the university across entire partnership continuum<br>• Number of dollars leveraged from other sources<br>• Rolling average of total research dollars spent at the university (both sponsored research and gifts for research)<br>• Total non-research philanthropy dollars (unrestricted funds by business unit)<br>• Number of students recruited<br>• Number of interns hired full-time<br>• Number of master agreements and associated task orders<br>• Number of individual sponsored projects with multiple faculty and students involved |

| University | Company |
|---|---|

## Involvement with Researchers

| University | Company |
|---|---|
| • Sponsored research dollars by department<br>• Number of Sponsored Research Agreements, NDAs, and licenses<br>• Percentage of executed Sponsored Research Agreements and licenses<br>• Number of proposals, campus visits, and faculty sent to companies<br>• Median and average size of sponsored projects<br>• Number of papers published as a result of joint research<br>• Total unrestricted research dollars | • Ratio of projects per year to payments per year<br>• Size ($) and number of research projects<br>• Number of departments with funding from the company<br>• Number of business units funding the university and depth of engagement<br>• Number of areas of interest where the university is internationally recognized<br>• Type, number, and value of the deliverables received from the university per year<br>• Value of knowledge gained from the activities at the university and internships<br>• Value for gift in kind<br>• Number of years of continuous funding at the university<br>• Number of publications resulting from sponsored research<br>• Milestones regularly achieved<br>• Number of licenses, publications, and patents<br>• Products picked up from early-stage funding<br>• Response time to requests from the company<br>• Number of posters presented at scientific meetings by faculty or student(s) on company-sponsored projects<br>• Number of faculty visits to a company site |

## Involvement with Students

| University | Company |
|---|---|
| • Number of students interviewed by the company<br>• Number of students hired by the company<br>• Number of student interns and their area of study (per year)<br>• Number of interns hired full-time<br>• Number of alumni currently working at the company<br>• Total unrestricted gifts for scholarships and fellowships<br>• Number of direct interactions between company representatives and students (e.g., lectures, appearances on campus, resume reviews) | • Number of new hires from the university per year<br>• Number of alumni currently employed<br>• Level (entry, mid-level, C-suite) of alumni within the company<br>• Length of time the students stay with the company<br>• Level of research productivity of Ph.D. students hired<br>• Dollars spent on scholarships and fellowships<br>• Extent to which the university collaborates with the company on curriculum development<br>• Number of capstone projects that result in hiring the student<br>• Number of students being taught by company representatives<br>• Number of industrial sponsored graduate recruiting events<br>• Number of student visits to a company site |

| University | Company |
|---|---|

## Access to Resources

| University | Company |
|---|---|
| • Amount of executive/graduate education provided by department<br>• Rolling average of company employees taking courses each year<br>• Number of units/departments performing testing services<br>• Dollars spent on clinical trials<br>• Number of Clinical Trials Agreements<br>• Number of students who take courses or work with curriculum provided by the company | • Number of employees accessing graduate/executive education (both online and in-person)<br>• Access to novel equipment or resources<br>• Dollars spent on services, specialized testing, and facilities/equipment use<br>• Number of students who take courses or work with curriculum provided by the company |

## Involvement in Centers & Consortia

| University | Company |
|---|---|
| • Company representatives on boards<br>• University representatives on company board<br>• Company membership in centers or consortia<br>• Number of students who participate in internships with companies<br>• Number of times the company has renewed its membership<br>• Number of licenses or startups that result from the center or consortia<br>• Federal dollars brought in as a result of the center or consortia<br>• Number of sponsored research projects that spin out of the consortia | • Memberships in centers and consortia<br>• Rent paid for co-located offices, lab room, or other work space<br>• Number of co-located employees (industry on campus or faculty within the company)<br>• Amount spent on meetings/conference registrations and sponsorships<br>• Number of students hired as a result of membership in centers or consortia<br>• Number of corporate projects that spin out of the consortia |

## Economic Development

| University | Company |
|---|---|
| • Number and size ($) of joint projects with direct government support<br>• Number of jointly supported startups<br>• Investment dollars from in-state venture capital firms<br>• Amount of federal flow-through from the company<br>• Number of licensing agreements | • Amount of fees and royalty payments<br>• Number and size ($) of joint projects with direct government support<br>• Revenue from sale of licensed products<br>• Number of licensing agreements<br>• Amount of federal flow-through from the university |

## Marketing

| University | Company |
|---|---|
| • Amount of money university spent at the company<br>• Percentage of customer base that accounts for the university<br>• Existence of an affinity deal | • Number of students/faculty using the company's product<br>• Number of vendors on campus and generated revenue<br>• Amount of advertising spent at the university<br>• Estimated number of people reached through on-campus engagement and advertising |

## Sources of Metrics: Where to Find the Numbers

The following offices are potential sources of the metrics listed above.

**University Metrics Sources:** Tech transfer office, vice chancellor of research, federal affairs office, state and local economic development agency, career services, alumni relations office, LinkedIn, college-centric career services, center's social media, development office, Ph.D. student advisors, office of research, office of facilities management, library, office of research infrastructure, office of innovation, facilities and equipment database, information technology services office, provost, dean for office of research, office of corporate relations, faculty survey, affinity management, student life, sports sponsorship

**Industry Sources of Metrics:** University relations group, human resources, personnel database, global partnerships, legal office, project management systems, purchasing/procurement, corporate foundation, company P&L reports, communications/public affairs

Strengthening
University-Industry
Partnerships

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