

Joint Faculty Employment

Between companies and universities



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UIDP undertakes projects to help its academic and corporate members advance their interests through greater collaboration and partnerships between sectors.

Domestic and global demands and disruptive innovation place vital demands on universities and industries to source and retain expert human capital (Patel et at., 2019). Talent scarcity, particularly in high-demand areas like computer science, requires companies and universities (as well as other employers) to pursue creative approaches to meeting their personnel needs. One relatively new strategy used by companies and universities is to share talent via joint employment; this approach has been successfully used by universities with other types of employers, such as hospitals and national labs, and, under the right conditions, can be used with private-sector employers in other industries.

Joint employment requires non-traditional arrangements. A myriad of issues must be proactively considered and addressed prior to entering any such arrangement with an employee or with a partnering organization. While the best solution depends on the situation (e.g., public universities may face different challenges than private ones, and companies in different industries may also face unique circumstances), partnering organizations need to consider a common set of issues.

Joint employment may result from a coordinated effort to simultaneously recruit a new employee to both a university and a company. Alternately, it may result from a university recruiting an industry employee to join its faculty or a company recruiting a faculty member to join its staff, while the current employer seeks to retain the employee part-time. In all three situations, joint employment requires a collective will of the employee, company, and university to enter into an arrangement, and thus each party must view joint employment as advantageous, or at least acceptable, relative to the alternative of conventional employment.

The process is also extremely important. Prior experience shows that effective and timely communication among all parties (company, university, and researcher) will bolster the likelihood of positive outcomes. The opposite is also true: excluding one party from discussions can decrease the possibility of joint employment and cause hard feelings among the parties.

While joint employment arrangements require thoughtful planning and execution, they can provide significant benefits to both employers and employees.

Definition and Scope

This guide provides a set of critical issues that need to be discussed and resolved in a joint employment arrangement between a company and a university. The issues reflect the complex administrative structures and human resource ecosystems needed for joint employment, including administrative, managerial, compensatory, and peer relationships processes; core employment issues in areas such as intellectual property management and publications; and best practices and key considerations for success.

For the purposes of this guide, we limit the term *joint employment* to faculty who are classified as long-term, multi-year employees at both a university and at a partnering company, with a combined effort equivalent to full-time and where the faculty member conducts research and/ or development at both the university and the company.

This guide is focused on U.S. universities, which are obliged to follow regulations set by the federal government. For example, the Bayh-Dole Act sets unique legal requirements for assignment and commercialization of intellectual property (IP) resulting from research supported with federal funding.

Characteristics

The following characteristics are common for the arrangements that are considered in scope for this guide.

- Employee's time is split between the company and university on a recurring, ongoing basis. The joint employee's time may be split based on the day of week, the time of year, or averaged over pay periods. It is also possible that the percentage of effort at either the company or university may adjust on a recurring basis based on changing conditions.
- Long-term, multi-year. This guide is focused on joint employment opportunities that take place over an extended period of time. One reason for pursuing the type of joint employment opportunities discussed here is the semi-permanent or permanent nature of the relationship. Therefore, this guide focuses solely on arrangements that occur over multiple years.
- **Genesis of arrangement.** Joint appointments may originate in many ways. Examples of the origination of joint employment arrangements include, but are not limited to (1) joint recruitment effort of the company and university, (2) desire of employee, company, or university to create a joint arrangement from an existing sole-employment arrangement, or (3) industry acquisition of a start-up company, through which the faculty member becomes an industry employee.

Work Arrangements

The following work arrangements are out of scope for the purposes of this guide:

Faculty consulting arrangements involving payment in addition to base salary. Faculty
members routinely consult for companies as independent contractors. Virtually all institutions
of higher education provide this option to their faculty, typically limited to one day per week.
Under consulting arrangements, work-related matters are decided between the faculty
member and the company, subject to disclosure and approval under the university's conflict
of interest policies.

- Veterans Affairs (VA) and other health system appointments. Many universities with medical schools have relationships with VA hospitals or other health systems that serve as teaching hospitals. Clinical responsibilities and compensation arising from these relationships have established norms and do not require attention in this guide.
- Faculty start-ups. Many faculty members assume management or ownership roles in start-up companies based upon their university research. Start-ups create a unique set of issues that fall outside this document's scope (although if the start-up is acquired by an established company, they may fall within scope).
- **Teaching adjuncts.** Universities often employ industry employees as part-time adjunct faculty for the sole purpose of course instruction. Because such relationships are limited in scope and differentiated from industry responsibilities, they are routinely executed directly between the university and the industry employee.
- Sabbaticals and other forms of short-term employment. Tenured faculty are regularly granted sabbaticals where they are freed from their normal university responsibilities and can pursue new research or scholarly pursuits. One option is a short-term (i.e., one semester to one year) assignment at a company site where they are an employee of the company. While the faculty member is receiving two paychecks (one from the university and one from the company), this falls outside the scope of this project. A small number of companies also offer sabbaticals to their employees, and research shows that companies benefit from offering these arrangements. Under these arrangements, the company employee is unlikely to receive compensation from a university. In fact, the company may provide a modest award to the university to offset the costs of their employee working in a university lab.
- Industry personnel on university campuses. Industry personnel may be on university campuses for a variety of reasons, such as serving on dissertation committees, or as an industry advisory board member, or as uncompensated visitors or uncompensated adjunct faculty. These roles and many others are straightforward in nature, because there is a clear delineation between employment responsibility at the company and effort devoted at the university.

Strategic Considerations Prior to Beginning Discussions

Prior to considering joint employment, each party (company, university, and researcher) should carefully consider how a joint employment relationship advances strategic and professional goals. Strategic goals may include:

Retention and Attraction of Outstanding Talent

Joint employment may be preferable to the alternative of losing a valuable employee, and joint employment may be the only way to attract a talented new employee with an exceptional reputation.

Advancing Innovative Research

As a joint employee, a faculty member will become more aware of interesting and challenging industry problems or have access to data or tools that would not otherwise be available in a university environment. Such access may lead to more innovative research or access to new

sources of government funding, advancing the reputation and impact of both the university and company.

Enhancing Teaching

A joint employee may infuse the classroom with exciting work originating from industry, enlivening student education. A joint employee may also help students assess or gain employment in industry.

Bringing Innovation Into Companies

Exposure to fundamental university research and students may raise awareness of novel discoveries for companies, as well as help the company develop a pipeline to attract world-class talent.

Joint Ventures

Joint employment may be part of a strategic joint venture between a company and university that intermixes education, research, development, and commercialization, within a shared mission.

Access to Specialized Equipment or Other Resources

Many companies and universities possess vast computing resources, proprietary data sets, or specialized equipment that can help advance research and development if shared.

Such strategic opportunities must be tempered against the complexities of managing joint employment arrangements, as well as maintaining healthy and ethically sound long-term university-industry relationships. University and industry partners should not use a single contractual discussion for joint employment to define their relationship. Rather, joint employment may be part of a strategic endeavor to elevate a department, center or school within a university in tandem with a business unit in a company.

Roles of Internal Stakeholders

The decision to enter a joint employment agreement requires consultation and/or consent from multiple parties within the company and within the university. It is important to be aware that perspectives will vary within each organization and may reflect differences in knowledge of legal issues or obligations, prior experiences, professional jealously, risk tolerance, optics, and other factors. Each participating organization should resolve internal disagreements, and arrive at a unified strategy, prior to negotiating with an external party.

Companies

Management: Typically, such co-employment decisions require approval both by middle management and at least VP-level approval, taking into consideration the fraction of time devoted to company work, optics for other team members who do not have dual status,

the precedent set, and measurement of success for someone who is employed only for fractional time.

Employment legal counsel: The industry employment legal team (both U.S. and international) seeks to harmonize any new or tailored contract with a company's existing employment contract terms and conditions. The employment legal team will also be sensitive to local legal employment requirements as well as setting precedents or unique employment clauses.

Intellectual property (IP) legal counsel: The IP legal team seeks to clearly delineate work done by the employee at the company and at the university. The team will seek to avoid future disputes that may call into question IP ownership. The IP legal team may push for complete separation of the topics that the joint employee researches for the company and the university. They will also work to identify background IP (BIP), code, or data that may be inadvertently transferred to or from the company. Additionally, the IP legal team will seek assurances from the hiring managers about how the work will be separated in terms of the understanding of the employee and the physical infrastructure. As a result, the IP legal team may wish to directly brief the joint employee to ensure that the expectations are clearly communicated.

Finance (both central and regional): A company's finance team cares about what costs are being incurred, particularly if there are "special arrangements" for paying for the student(s), extra travel, or otherwise "hidden costs." Typically, finance wants to understand the class or role of the joint employee (full-time, part-time, or contractor). The fraction of time that the employee has with the company has an impact on which benefits are available to the employee. (See *Benefits* listed under the *Agreements* section for further explanation.)

Human resources (HR): HR is concerned about the impact of a joint employment situation on all company employees, accounting for company culture and diversity. They are concerned about compensation arrangements, titles, measuring performance, and holding employees accountable. They are also concerned about individual employee well-being, the employee's ability to maintain work-life balance, and the ability to manage two jobs and hold responsibilities with two employers.

Universities

Academic department, college, and school: The department chair and college/school dean must approve the relationship, particularly as to responsibilities and expectations for part-time employment as well as resource allocation, such as lab space, equipment, and other facilities. In cases of new hires, the department faculty may also need to approve the joint employment. It is advisable for department faculty to be consulted when an existing faculty member seeks to reduce his or her appointment, to maintain positive relations within the department, and avoid any adverse consequences. The department may also negotiate with the college/school and/or university to supplement its faculty in the absence of a full-time appointment.

Chief academic officer: The Office of the Chief Academic Officer (e.g., provost, vice-chancellor) will review and approve joint employment and ensure that it is consistent with university policy for faculty appointments, including university benefits, tenure obligations, and faculty handbook rights and responsibilities. The chief academic officer may consult a university-level faculty committee or academic senate prior to approving the relationship, and the provost may also consult the university's human relations organization and general counsel's office. Some universities may require additional approvals through a board of trustees or possibly the headquarters of a university system.

Senior research officer: The senior research officer, such as the vice president for research or designee, will review and approve the relationship with respect to university research policy and obligations in research agreements, focusing on conflicts of interest, intellectual property, and publication rights. The relationship may also be reviewed by a faculty committee with respect to these issues.

Joint Employee

The potential joint employee must desire to engage in the relationship, based on the combined opportunities of working as a faculty member and an industry employee, weighed against the complexity of the relationship. The joint employee will also consider how the relationship may affect other opportunities, such as work as a consultant elsewhere, participation in start-up companies, or the ability to secure research funding. Personal considerations, such as travel requirements, relocation, tax implications, or the need to maintain two residences, will also matter to the joint employee.

What Industry Employers Need to Know About University Appointments

Most tenured and tenure-track engineering and science faculty are expected to split their university effort between research, teaching, and service. Outside of health-related schools (such as medicine and pharmacy), faculty are typically guaranteed salary for nine months of compensation (the academic year). During summer months, faculty can supplement their base university salary through sponsored research or extra university duties (e.g., for administration or summer teaching). If they forego summer vacation, faculty may be able to earn three months of summer university salary from various sources, though others earn less, and some do not earn summer salary at all. Some faculty may also cover a portion of their nine-month salary from sponsored research agreements, often in exchange for a reduction in teaching load.

Within health schools, faculty are typically guaranteed a 12-month salary and may also accrue vacation time as part of their employment. However, such schools typically expect their science faculty to cover a substantial portion (as much as 95%) of their base salary from sponsored research. Such faculty may have minimal teaching responsibilities.

Tenured faculty have significant job security and can only be dismissed under exigent circumstances or for serious misconduct. Tenure-track non-tenured faculty gain tenure upon rigorous academic review, typically after five to seven years of employment as an assistant professor. Universities employ a variety of other faculty types, such as clinical professors, adjuncts, and lecturers, who usually have less job security than tenured or tenure-track faculty.

In the absence of university salary, nine-month faculty have substantial freedom to obtain outside positions during the summer, so long as they do not interfere with their university responsibilities. For instance, teaching or conducting research elsewhere would likely require approval under the university's conflict of interest policy.

Most universities permit faculty, whether nine-month or 12-month, to consult up to one day per week throughout the year, provided that this does not interfere with any of their university responsibilities.

Effort reporting is a complicating factor in considering faculty time commitments. The federal government requires that faculty account for the fraction of their university effort applied to sponsored research projects, so universities must have systems for faculty and other employees to certify that the effort devoted to projects matches the effort claimed. The federal government uses a broad definition of effort. Essentially, effort is the entirety of the professional work that a faculty member typically performs for the university (external consulting is not considered university effort). There is no prescribed number of work hours. If a professor normally works 65 hours a week on all of their professional work during the academic year, that is considered 100% of their effort, to be accounted for by the university to comply with federal regulations.

Universities own most intellectual property developed by their faculty utilizing university resources, whether that work is funded by a federal research grant or part of the professor's other university activity. Universities normally require assignment of IP resulting from their university research to the university as a term of employment. However, universities typically do not claim ownership of publications or artistic works. Standards vary as to ownership of course software or other digital course content. For research, the rare exception is when the university relinquishes its ownership of the intellectual property as part of a negotiated research agreement with a company or other non-governmental entity. Under the Bayh-Dole Act, universities are required to share a portion of the income derived from patents with inventors (including faculty, staff, and students).

Faculty performance assessments vary in frequency and scope among universities. However, the most consistently thorough reviews occur at the time of promotion from assistant to associate professor, or associate to full professor. These include the creation of comprehensive dossiers and assessment by senior faculty both inside and outside the institution, as well as review by administration up to the level of the chief academic officer. Annual reviews typically include an annual faculty report on his or her accomplishments, which is reviewed by peers and chair in the department, following a procedure established by the school/college and university.

What Universities Need to Know About Corporate Employment

Most corporations hire engineering and science professionals to work full-time for the company, although they can hire persons for part-time work or term contract employees. These professionals are usually salaried and may be hired and fired at the discretion of the company. In some cases, specific numbers of hours are expected to be worked each week, although this is relatively uncommon. Employees are rarely allowed to consult, and where this is permitted, it is likely the result of a review/approval process that explores whether there is any direct conflict of interest between the full-time work and the consulting.

The company usually owns all intellectual property developed under the auspices of the work for the company and often even intellectual property that an employee develops outside of the workplace, particularly if it is related to the company's business and the employee's scope of responsibilities. Unlike universities, companies do not normally commit to providing any share of IP income to its inventors.

Corporate employers have at least annual and sometimes bi-annual (twice yearly) *performance* assessments. These result in performance ratings that directly affect the employee's bonus, any salary increases, promotions, and stock assignments. The shape of the salary-bonus-stock ratio varies significantly between companies. with some offering lower salaries than others but significant potential bonuses or stock allocations for high-performing employees. Care is needed on the side of the employee to determine whether the combination makes sense and over what time frame as it may take several years for the benefits of the stock allocation to be felt.

University-Industry-Researcher Relations

In successful joint employment arrangements, there is usually a commitment to transparency that forms a common understanding between the two employers and the researcher that co-employment is a good and healthy consideration for the employers, researcher and any students who may be involved. To maintain a healthy relationship among all three parties:

Tone and Attitude for Discussions

Establishing a common understanding and collaborative tone early on in discussions between the stakeholders (university-industry-researcher) can be a healthy approach for creating a successful joint employment arrangement. Some companies have found that starting negotiations at the wrong point creates an unnecessarily awkward situation with the university. For example, if a company fails to recruit a faculty member as a full-time employee, then several options remain. One is to forgo a formal relationship with the faculty member altogether. Alternatively, the company can attempt to engage the university to secure some fraction of the faculty member's time, but this could become more contentious once the university comes to understand that the company had a failed attempt to fully hire the faculty member. Given this, timely and early inclusion of the university in a discussion about joint

employment can circumvent the situation where a university finds itself needing to adopt a defensive posture. Appearing aggressive or predatory does not ultimately serve any of the stakeholders well. In contrast, when joint employment is introduced in the context of a broader relationship discussion, the company effectively signals that they are interested in mutually beneficial outcomes, and the university is often more open to making the arrangement work.

Key Learning: An aggressive posture or secretive approach by one employer may be interpreted as hostile by the other party. Ultimately, such misinterpretation can create a barrier to effective joint employment. For the most beneficial outcome, both employers should actively seek to avoid aggressive posturing and should strive toward positive and open discussions.

Defining Success

Joint employment arrangements are complex deals that involve multiple parties with differing interests. As a result, success may look different to the company, the university, and the researcher. Defining success up front ensures that everyone is on the same page and that all parties understand the motives in play. In the most effective joint employment arrangements, all parties have a mindset focused on joint success.

Public Messaging

Parties should agree on how the joint employment arrangement will be communicated internally and externally for each organization. All parties should be on the same page when they respond to questions about the joint employment arrangement.

Agreements

The details of a joint hiring arrangement should be specified through agreements, which may take varying forms. The required agreements include employment agreement between the company and the employee and a comparable employment agreement between the university and the employee. Additionally, a university or company may create an internal memorandum of understanding, signed by the participants (e.g., provost, senior research officer, dean, department chair, and faculty member at a university), outlining their common understanding of the arrangement. Externally, the university and company may execute a joint hire agreement, possibly co-signed by the employee. Considerations in these agreements include:

Human Resources Logistics

Location: The physical location where the research and other job responsibilities are conducted can be a major factor in structuring a joint employment arrangement.

The physical location can be an important factor and useful determinant in tracking hours and assigning IP rights. Similarly, when specific equipment and services used by the employee (e.g., computers, lab equipment, cloud computing time) are owned by either the university or by the company, the hours and IP rights may need to be clarified. However, it is increasingly common for the employee to work at remote locations not owned by either employer. Working from home, working at conferences, and working while traveling are all work sites that are not inherently useful in clarifying IP ownership. Therefore, a strategy and process for separating and tracking the work for each employer is an important consideration for both employers and for the employee. The processes and practices the employee plans to use should be documented at the onset of the joint appointment and agreed to by the employers and the employee.

The company and university need to consider and document how the employee is to be compensated for travel expenses. Some travel will be clearly related to one of the two employers—travel from home to company and travel from home to university—and it will be up to the employer and employee if that travel is reimbursed. However, much travel may be more ambiguous—from university to company, from home to a conference or workshop, etc.—and it is recommended that clear policies on travel reimbursement be established at the onset of the joint employment, particularly if significant travel is expected. Travel tracking and reimbursement are simplified if the company and university work sites are in close proximity to the employee's residence.

University effort reporting: University faculty are required to report and certify the usage of their time on a percent effort basis. The total amount of effort that a joint employee puts into university activities must be accounted for and reported to research sponsors. This is a compliance matter for all researchers whose work involves the use of federal funding. As a result, a joint employment arrangement needs to include guidelines for the employee to fulfill their effort reporting requirements in a clear and accurate way.

Benefits: The benefits package and non-salary compensation package are other aspects of joint employment. Most employers have clear policies around the type of benefits that are available to full-time and part-time employees. Further consideration needs to be given to which benefits package the joint employee qualifies and whether the company, the university, or both will provide benefit packages. In some circumstances, companies and universities who are jointly hiring an individual will intentionally structure the individual's time (or effort) not to be split 50/50. Even a split of 49/51 can provide clarity for certain companies or universities. In addition to health benefits, retirement contributions, pension plans, stock options, and tuition remission programs should all be considered. Of note, the level of the employee in question (early career versus already tenured) may play a significant role in determining compensation levels and benefits packages. Retirement compensation is often split between the company and the university with each providing separate plans. Meanwhile, a benefit such as tuition remission may be a reason for a joint employee to request to be at least 51% at the university.

Although salary and bonus payments in industry may be slightly higher than those of academia, it may well be the stock allocation and the potential growth in stock value that ultimately provides the most substantial boost to the employee's income; eligibility for stock allocation can be an important factor in assessing the benefit of becoming a part-time or full-time employee. The allocated stock typically begins to vest one year from its initial allocation, then in installments until it fully vests after (typically) five years. The stock vesting duration sets a natural time frame for engagement with a company, particularly if the employee receives a large allocation at the point of signing on with the company.

Work expectations: Employees need to know up front how they are expected to distribute their time between the company and the university. They also need to be aware of time reporting requirements at the company and effort reporting requirements for the university. (See the section above, *What Industry Employers Need to Know About University Appointments*, for an explanation of effort reporting.)

In all likelihood, a university faculty member shifting from working full-time for the university to splitting their time between the company and the university will result in a shift in their university responsibilities. In many cases, this results in a decrease in the service and teaching responsibilities as well as research at the university. Jointly employed researchers have less time to devote to service and teaching, and this may not be received well by university colleagues, particularly if the reduced effort does not help the department recruit new faculty to offset their reduced efforts. Therefore, the university should carefully consider how salary savings are used toward satisfying the ongoing needs of the department.

Furthermore, the joint employee needs to know what their responsibilities will be for each employer, how they will be held accountable, and how their performance will be assessed. There should also be a plan for how the employee will resolve conflicting priorities and potentially conflicting schedules.

Performance reviews: Functionally, a joint employee will report to at least two separate units and two separate employers. Each employer must set expectations that are realistic in light of the employee's percent effort, while maintaining accountability. Setting up a joint employment arrangement means that the company and the university each needs a clear plan for measuring and reviewing the employee's performance that is fair for the employee and consistent with the standards set for the employee's peers.

Compensation: In most situations, each employer will have the sole authority to set compensation for work on their behalf. Employers are unlikely to share compensation information.

Consulting: Most universities allow faculty to consult up to one day per week, which may be problematic for some industry employers. It is important to clearly define any constraints on outside consulting as part of the faculty's employment agreement with the company.

Tenure: Tenure provides substantial job protection after the successful completion of a rigorous academic review and is only offered by universities. Two separate cases are worth considering.

The first and most complicated case is a joint employee who does not already have tenure at the university. In this case, the university needs to consider whether tenure is permitted under joint employment and, if so, how and when tenure would be reviewed. The tenure process may or may not take into account the research accomplishments while working for the company. The university will also need a way to assess service and teaching contributions for a fractional employee. It would also need to consider how the arrangement would be assessed through external assessment and university committees.

The second case is a tenured university faculty member converting to a joint employee. In this case, the university needs to weigh the meaning of tenure in the context of joint employment and reach agreement with the joint employee.

In either case, the university needs to determine whether in the event that the joint employment with the company is terminated that (a) the university guarantees the salary associated with the percent effort that the employee contributes to the university under the joint employment arrangement, or (b) the university guarantees that the faculty member will have a full time job at the university. In both cases, the university also needs to determine what, if any, other resources the university is obligated to provide to the faculty member as a consequence of tenure.

Allocating and phasing effort between employers: The amount of time that a joint employee spends at the company and the university can evolve over time. Many universities place a hard cap on how long a faculty member can be away from their full-time university duties before having to make a decision to return to the university or depart; a common limit is two years away or in a shared position (e.g., starting a company or employed by an established company), beyond the standard 20% consulting cap. Another university approach is to set a sliding scale (two years away at 80%, or two additional years away at 50% and then some lesser openended amount). However, universities are able to grant exceptions permitting longer-term joint appointment, possibly after careful review by a faculty committee.

Backfilling partial positions: When a full-time university faculty member begins to split their time between a company and university, the university may need to fill the remaining partial position, which might be done through fractional or full-time positions, with tenure-track faculty or non-tenure-track faculty. Universities have varying rules and financial models for how departments are granted permission to recruit new faculty. Those with the most stringent rules will have the most difficulty with long-term joint-employment arrangements, as they may find it impossible to offset the partial loss of a faculty member.

Other financial considerations (non-compensation): In cases where an exceptional tenured faculty member is converting from being a full-time university employee to splitting their time between the university and the company, other financial considerations may take place. For example, when a company recruits a faculty member from a university, the company may

choose to support the university through a gift or other mechanism. These situations are rare and typically occur when an exceptionally talented faculty member is converting to being a joint employee.

Research Considerations

Ability to publish: Universities guarantee academic freedom to their faculty, including the freedom to publish their research. Companies usually do not offer such freedom. Publication tends not to be an issue if there is a clear delineation between the work done at the company and the work done at the university. When the line is blurred, the company and university need to decide on criteria for publication jointly.

For companies, there is typically an established internal process for reviewing the publication. Many universities have policies preventing any review by the company for research done for the university. In cases where there is a review process, the review should be restricted to verifying IP ownership, and the timeline to complete the review should be limited.

Promotional publications and product endorsements are other potential issues. Most universities do not allow their employees to endorse products or promote specific companies through their research. Such a policy would likely follow through joint employment. In the event that a company or product was promoted, the university's name should not appear in the publication. Similarly, the company's name should not appear on academic publications for research undertaken at the university.

Data usage and rights: The transfer of data, code, and know-how between the company and the university is often intentionally restricted even when the data, code, or know-how is not subject to IP protections. Joint employees need to be aware of these limitations and need to be willing to work within them. The university and company often implement data transfer agreements in anticipation of such situations. Typically, a researcher (or the researcher's student) will NOT be allowed to take company data, code, or know-how back to be used in their university research unless a specific provision has been made for this as part of the engagement. Such arrangements should be clearly documented to protect the individuals, university, and company. For example, a student may need to request written approval to retain data/code while at the university if they are completing a paper following the end of an internship at the company under the supervision of a co-employed researcher. This common scenario can be anticipated early in the engagement, and suitable provisions can be put in place in advance.

Conflicts of interest: Both the company and university may require declarations of outside interests, along with review and approval. For the university, a management plan would likely be needed, addressing issues like protection of objectivity in research and protection of students. The relationship and plan may be reviewed by a faculty conflict of interest committee prior to university agreement.

In industry it is not uncommon for a situation to arise in which the co-employed researcher advocates for investment in her/his university, department, or even their own research team. Medium-to-large companies typically have robust conflict of interest processes that can be used to assess situations where contracts may be offered to third parties that employ or are run by family members. These protocols can be used in this case. Regardless of the existence of established processes, care is needed to remove the conflicted individual from decision-making so that an independent and rigorous assessment of the opportunity can be made. In some cases, companies have adopted policies such that senior managers/research leads cannot have co-employment with universities, specifically to avoid the situation where the budget owner is also the decision-maker on whether an investment is made in their own university. Likewise, university conflict processes may require that there be an independent manager of the project at the company, rather than permitting the employee to manage his or her own work. (For more information on managing conflicts of interest, see *UIDP Principled Partnerships Quick Guide*.)

Intellectual property: Both the university and company will seek clarity as to IP ownership. Some degree of clarity can come from distinctions made based on where work is conducted (either a physical location or device). Total separation of research is one way to circumvent disputes related to patents, products, and licenses, but may be impractical or difficult to enforce. In the event that total separation is the preferred method of separating IP, separation should be defined by topic, work location, resources, etc.

If IP ownership is delineated by topic, then considerations for academic freedom need to be taken into account. Additionally, any background intellectual property (BIP) should be declared at the outset of the agreement, including code and data. These guidelines include the caveat that the employee must adequately disclose existing IP to their employer, and the employer must protect the IP.

If there is expected overlap in the work done by the employee at the company and university, then an agreement between the company and university should lay out the terms of joint IP, since it is likely that this work falls outside the agreement for co-employment and into the area of sponsored research. Alternative approaches to consider are open science arrangements for the work being done by the researcher at the company and open IP models for industry-funded work done at the university.

Freedom of Information Act (FOIA): For public universities, the company and university should consider any FOIA requirements that may inadvertently require the disclosure of information that the company or university does not wish to disclose. Approaches such as the total separation of digital systems can mitigate FOIA concerns.

Waiver letter: A company may request that the university sign a waiver letter that states that the university will not make claims against the company with regard to the IP created by the joint-employee at the company. The university is likely to respond with a bi-lateral agreement consisting of a similar waiver granted to the university by the company for all IP created at

the university. In either case, the waiver letter may not fully resolve the question of ownership on any particular piece of work, and therefore does not substitute for establishing a clear delineation of ownership. (See a sample waiver letter in Appendix A).

Students and trainees: Often undergraduate, graduate students, or academic postdocs who are advised by a joint-employee can benefit from the employee's knowledge and experience in industry, including exposure to industrial research projects, unique opportunities for interactions with company personnel, or internship, co-op, or permanent employment opportunities. (See *UIDP PhD Student Internships in Industry.*) The company can benefit from access to talent.

Despite the advantages, extreme care must be exercised when students are involved in a joint-employee's research at the company. Because of the imbalanced power relationship between an advisor and that advisor's student, there is potential for problems that range from ownership of IP to inappropriate use of a student's time and effort to benefit the company. As a result, universities may require a conflict of interest management plan for students advised by a joint-employee. Such plans include clarifying effort by the student on research projects related to the company, advising responsibilities of the joint-employee (particularly when the employee is not resident at the university), appropriate assignment of IP developed by the student, publication rights for the student, and many other issues.

Not only is a conflict of interest management plan necessary to protect the student's rights, it is also necessary to assure the university's interests and those of other students. Most universities are non-profit entities that risk that status if preferential treatment is given to a company in terms of research effort by a student, preliminary research data before publication, or access to university resources. Furthermore, universities are obligated to equal access for all students. Thus, universities cannot provide students advised by joint-employees with opportunities, income, or status that is significantly different from other students.

As a result, universities must openly and clearly delineate the rights and responsibilities of students who are advised by joint-employee faculty. This can be done in many ways, although it is often accomplished via a conflict of interest management plan approved by the university.

References

Patel, Patel; Rexford, Jennifer; Zorn, Benjamin; Morrisett, Greg. (June 2019). Evolving Academia/Industry Relations in Computing Research. Computing Community Consortium (CCC). Retrieved from https://cra.org/ccc/wp-content/uploads/sites/2/2019/06/Evolving-AcademiaIndustry-Relations-in-Computing-Research.pdf

Appendix A: Sample Waiver Letter

Date Address

This letter confirms the nature of your relationship between *Company* and *University* as well as to clarify and agree the ownership rights to certain intellectual property that may be developed and contributed to *Company* and/or to the *University*.

In relation to a separate employment agreement, you have been offered a role as an employee of *Company*. This letter does not change the terms of that agreement in any way. In order to assure *Company* that the work you do for *Company* shall remain the property of *Company* and because every university has slightly different rules, expectations and requirements, we require this letter to be countersigned by you and *University* so that there is no confusion about your role with *University* and the effect of that relationship on your work with *Company*.

You hereby certify to *Company* that you are employed by *University* in the roles set forth in Attachment 1 to this letter. In that you are employed by *University*, you hereby certify to *Company* that you have submitted all relevant documentation to *University* that may be required to permit your employment with *Company*, including any conflict of interest registrations, disclosures, or forms. You also understand that certain university policies may assign ownership of the intellectual property you develop as an employee of *University* unless you obtain the required consents. You hereby certify to *Company* that if any such consents or waivers are required for you to work as an employee of *Company*, you have obtained such consents and/or waivers.

This letter also confirms that the *University* makes no claim of ownership or other rights (and waives any claims it may have) in any intellectual property created by you while working on at *Company* or using *Company* resources or facilities, including, but not limited to, source and executable code, algorithms, trademarks, copyrights, trade secrets, inventions, designs, patents and patent applications, ideas, and business plans that you created and contributed to *Company*, including its affiliates, and their products and services as part of your work performed for *Company*. Both you and *University* acknowledge that all such work is independent of your work for *University* and conducted in a manner consistent with university rules and policies.

This letter also confirms that the *Company* makes no claim of ownership or other rights (and waives any claims it may have) to any intellectual property created by you while working at *University* or using university resources or facilities, including, but not limited to, source and executable code, algorithms, trademarks, copyrights, trade secrets, inventions, designs, patents and patent applications, ideas and business plans that you created and contributed to the *University*, including its affiliates, and their products and services as part of your work performed for *University*. Both you and the *Company* acknowledge that all such work is independent of your work for *Company* and conducted in a manner consistent with *Company* employment terms and policies.

Signature and date for company Signature and date for co-employee Signature and date for university

Attachment: Statement of position and research focus at *University*.

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