

CHAPTER THIRTEEN

THE UNIVERSITY–INDUSTRY DEMONSTRATION PARTNERSHIP: AN INCREMENTAL IMPROVEMENT TO UNIVERSITY-INDUSTRY COLLABORATION

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INTRODUCTION

The cover of the July/August 2007 issue of the *Harvard Business Review* has two phrases that sum up the goals of university-industry collaboration: ‘Managing for the Long Term’ and ‘Going the Distance’. Although those phrases were meant for companies, these phrases accurately reflect what university-industry collaborations and the University-Industry Demonstration Partnership (UIDP) are all about.

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All comments herein are solely my own and do not represent the opinions or positions of the University-Industry Demonstration Partnership. Special thanks are extended to Robert Killoren, UIDP President, Dr Susan Butts, UIDP Vice-President, and Dr Merrilea Mayo, GUIRR Director, for their assistance and counsel. Dr Casey has previously written on university-industry collaborations. See ‘Long-Term University/Industry Collaborations’ (June 2007) *R&D Magazine Academic Sourcebook* 26–7; ‘University-Industry Connections: A Small School Perspective’ (June 2006) *R&D Magazine Academic Sourcebook* 9, 11; ‘Developing Harmonious University-Industry Partnerships’ (2004) 30 *Dayton Law Review* 245–63; ‘Enhance University-Industry Collaboration’ (2005) *Milwaukee Business Journal*, June 3, A53; ‘Making a Good Thing Even Better’ (Fall 2004) 14(2) *Research Management Review* 10–22. In addition, Dr Casey was co-editor and contributor to *Living Studies in University-Industry Negotiations: Applications of the Guiding Principles for University-Industry Endeavors* (National Council of University Research Administrators and the Industrial Research Institute, April 2006). Additional articles by Dr Casey that may be of interest include: ‘An Era of Uncertainty, An Era of Opportunity’ (July/August 2007) *NCURA Newsletter* 4–5; ‘Giving it Away: Free Technology Transfer to the SME Sector’ (Spring 2006) 15(1) *Research Management Review* (with Dr Peter Kavanagh and Mr Andy Maguire, Dublin Institute of Technology); ‘The Legal Dimensions of Research Administration’ (Winter 1998) 10(1) *Research Management Review* 7–17.

Put another way, university-industry collaborations are critical long-term infrastructure developments. Managing for the long term should be a goal for all managers of these partnerships.

This chapter addresses a number of topics. First, it discusses recent initiatives in the United States to strengthen these collaborations, particularly the University-Industry Partnership Project (UIPP). Then, it transitions to discuss the UIDP and its first demonstration project—TurboNegotiator (TN). Lastly, the chapter makes some concluding observations about the UIDP, TN, and university-industry collaborations in general.

Background

University-Industry collaboration is a critical topic currently being discussed in US academic, industry, and government circles. With federal research funding being in a state of zero growth or actual decline (depending how you want to slice the numbers), colleges and universities are being forced to diversify their sponsored program and research portfolios. This includes looking for new funding sources from private business, corporate foundations, and other non-profit foundations. In addition, the new and expensive costs of US homeland security and the wars in Afghanistan (2001) and Iraq (2003) are having a significant fiscal impact upon the future shape of the US budget. I noted these facts in the article I wrote for the July/August issue of the *NCURA Newsletter* (National Council of University Research Administrators), and made the further observation that research/R&D funding in the United States does not occur in a vacuum.² It is intimately tied to other policy choices that President Bush and the Congress make. These same choices also occur in other western democratic societies.

Another important dimension is how industry is investing its R&D funds. As an article in the July/August 2007 issue of the *Harvard Business Review* points out, from 2000–07 R&D has focused on new projects rather than on directed basic research.³ As author Jim Scinta, chair of the Industrial Research Institute's Research-on-Research Committee

² James J Casey Jr, 'An Era of Opportunity', (2007) July/August *NCURA Newsletter*, 5 <<http://www.ncura.edu/content/misc/newsletter/news724.pdf>>.

³ Jim Scinta, 'Where More R&D Dollars Should Go' (July/August 2007) *Harvard Business Review* 26.

points out, firms that dedicate a disproportionate amount of their R&D on new projects rather than basic research will probably satisfy some of their intermediate business goals but will fail to cultivate the broad-based knowledge that will ultimately lead to long-term growth through innovation.⁴ While the article does not specifically address business collaboration with higher education, a decline in basic research will most probably impact higher education research facilities that are capable of engaging in basic research.

Furthermore, over the past few decades American universities have enjoyed a strong productive relationship with private companies. On a general level there seems to have been a broad consensus that these relationships are important to the United States, domestically and internationally. Both sides have, by and large, found these relationships to meet their mission requirements. There is much to celebrate in this recent history of collaboration.

WHY UNIVERSITIES AND INDUSTRY COLLABORATE

Why do universities and industry collaborate? As I have previously written, the reasons are many, though this list is by no means exhaustive:⁵

- Universities provide a *ready pool of graduate and undergraduate students* that industry may access for their work requirements. Students in return receive critical workforce training that supplements coursework. Workforce training is increasingly recognised within the US as a critical component of education in a knowledge-based, international economy.
- *Technical opportunities exist in industry* for faculty and students that may not exist in institutions of higher education.

⁴ Jim Scinta, 'Where More R&D Dollars Should Go' (July/August 2007) *Harvard Business Review* 26.

⁵ James J Casey, Jr, 'Developing Harmonious University-Industry Partnerships' (2004) 30 *Dayton Law Review* 251–2. See also NCURA, GUIRR & IRI, *Industry-University Focus Group, National Council of University Research Administrators Annual Meeting* (2003).

- *Materials exist in industry* for research and educational purposes that may not exist in institutions of higher education.
- Collaborations with industry provide *research funding to universities*, a need that has become increasingly apparent over the past 10 years. Universities come to rely on the generation of extramural funding as they structure their budgets. A sad reality, though, as money should not drive every decision made within universities.
- Such collaborations can advance the *service mission* of universities, an increasing component of universities as they become more involved in their local communities. Such service has also been demanded by local and state governments within which the institutions are located; this could be considered a quid pro quo for tax-exempt status-or at least to forestall political retaliation against universities that are perceived to be ‘rich islands’ within some communities.
- Collaborations provide for *local and regional economic development*. There is evidence to suggest that university-industry collaborations contribute to the overall economic development of the United States. This is necessary in a post-industrial, knowledge-based economy.
- Collaborations between universities and industry often are *novel to high technology areas*, as opposed to low technology areas (such as basic manufacturing). Nanotechnology and materials science/engineering are examples of such high technology fields. However, the argument is being increasingly made that basic manufacturing is now ‘high technology’ and hence is important to the overall US economy.
- At some universities these collaborations are part of their *internal reward structure* (financial incentives to faculty which are critical for research development and retention of ‘star’ faculty). If universities seek to increase their research and sponsored program

portfolios, they must create reward structures for faculty and staff that bring in such extramural funding.

- *Universities often have research infrastructure that industry wants.* For many companies, it is simply more cost effective to contract out research to universities that have the research infrastructure in place rather than building from the ground up or renovating existing facilities.
- *Collaboration is encouraged by the US Government.* Whether through such legislation as the *Bayh-Dole Act of 1980* or through specific programs such as the NSF Partnerships for Innovation Program (NSF-PFI), the US Government explicitly encourages such collaborations. The NSF-PFI Program is an excellent example of combining intellectual property, workforce development, and R&D components into a consistent funding program.
- *Industry outsourcing to universities,* to reduce the costs of doing business and increase profits.

As this list illustrates, this symbiotic relationship reflects benefits to each partner. This is one strong characteristic of university–industry collaboration.

However, there have been recent indications that this relationship is strained and needs some tending to, primarily though not exclusively related to issues of contract negotiation and intellectual property.⁶ According to recent statistics from the American Association for the Advancement of Science (AAAS), there has been a recent decline in the

⁶ For additional background information on university–industry collaboration, the *Bayh-Dole Act of 1980*, the positives and negatives of *Bayh-Dole*, and suggested improvements in the law and regulations to make *Bayh-Dole* even more effective, see the testimony of Dr Susan B Butts, Senior Director, External Science and Technology Programs for the Dow Chemical Company. Her testimony of July 17, 2007, given before the US House of Representatives Committee on Science and Technology, Subcommittee on Technology and Innovation, recommends small changes in *Bayh-Dole* and tax regulations to clarify the intent of Congress relative to ownership/control of IP resulting from industry-sponsored research, with the intent to improve the climate for university–industry research partnerships in the United States. Testimony of Dr Susan B Butts, 17 July 2007, 1. She also reiterated an issue that surfaced during the University–Industry Partnership Project; namely, that foreign universities are more flexible with IP ownership and control, causing more sponsored research to be conducted abroad. Testimony of Dr Susan B Butts, 17 July 2007, 1.

level of industry support for university research in the United States. This information can also be found in the article I wrote for the *NCURA Newsletter* (July/August 2007).⁷ There is also evidence that suggests foreign universities are conducting increasing amounts of US industry sponsored research because they are willing to forgo ownership of intellectual property resulting from the research. American universities are more likely to demand sole ownership of IP generated from university research than their foreign counterparts.

As a September 2006 NSF InfoBrief stated: ‘A three-decades-long trend of increasingly strong ties between industry and universities may have ended.’ This sentiment is confirmed by the AAAS statistics provided for the *NCURA Newsletter* article.⁸

All of these factors lead to the conclusion that, despite a strong historical relationship between US higher education and industry, the present time is an uncertain era for these collaborations. Thankfully, it has been recognised by universities, companies, and the US Government that this trend must be reversed by more vigorous and successful collaborations.

PRIOR EFFORTS BY THE GOVERNMENT-UNIVERSITY-INDUSTRY RESEARCH ROUNDTABLE (GUIRR) AND THE INDUSTRIAL RESEARCH INSTITUTE (IRI)

From the 1980s until the convening of the University-Industry Congress in 2003, the Government-University-Industry Research Roundtable (GUIRR, part of the National Academies in Washington, D.C.) and the Industrial Research Institute, Inc. (IRI) were concerned with strengthening and improving university-industry partnerships.

GUIRR was created in 1984 in response to the report on the National Commission on Research, which called for an institutional forum to facilitate dialog among the top leaders of government and non-government research organisations. GUIRR’s formal mission was revised in 1995 to ‘convene senior-most representatives from

⁷ James J Casey Jr, ‘An Era of Opportunity’, (2007) July/August *NCURA Newsletter*, 5 <<http://www.ncura.edu/content/misc/newsletter/news724.pdf>>.

⁸ James J Casey Jr, ‘An Era of Opportunity’, (2007) July/August *NCURA Newsletter*, 5 <<http://www.ncura.edu/content/misc/newsletter/news724.pdf>>.

government, universities, and industry to define and explore critical issues related to the national and global science and technology agenda that are of shared interest; to frame the next critical question stemming from current debate and analysis; and to incubate activities of on-going value to the stakeholders. This forum will be designed to facilitate candid dialogue among participants, to foster self-implementing activities, and, where appropriate, to carry awareness of consequences to the wider public.⁹

The IRI is the foremost business association of leaders in R&D working together to enhance the effectiveness of technological innovation in industry.¹⁰ Founded in 1938 through the National Research Council, the IRI is comprised of senior executives from a diverse range of industries whose member companies are investing \$70 billion annually in R&D projects worldwide. The IRI is the only cross-industry organisation providing the R&D community with insights, solutions, and best practices in innovation management developed through collaborative knowledge creation.

These efforts were primarily concerned with the creation and modification of a variety of standard/boilerplate contractual agreements, including research agreements. Publications were released for university and private sector use, and over the years these model and boilerplate agreements became part of the university-industry partnership culture. There is no doubt that these model and boilerplate agreements served their roles well, and helped advance the growth of these partnerships. However, it is generally recognised that these publications only addressed part of the relationship, and certainly didn't have a profound impact on improving and managing these relationships in the more dynamic, internet-driven world of the 1990s and the present decade. As a result, it was generally recognised by GUIRR and IRI that more needed to be done within the relationship than promulgate new contract templates. The next section discusses their next move, partnering with NCURA (National Council of University Research Administrators).

⁹ GUIRR 2002 *Annual Report* 2.

¹⁰ Industrial Research Institute, Inc <<http://www.iriinc.org/>>.

UNIVERSITY-INDUSTRY CONGRESS/UNIVERSITY-INDUSTRY PARTNERSHIP PROJECT (UIPP)

The University-Industry Congress was established in 2003 by NCURA and the IRI, with GUIRR serving as the neutral convener. Subsequently the University-Industry Congress was renamed the University-Industry Partnership Project (UIPP).¹¹ The UIPP existed from August, 2003 through its national summit in April, 2006.

NCURA, founded in 1959, is a professional organisation of individuals with interests in the administration of sponsored programs (research, education, and training) primarily at colleges and universities. With over 6000 members nationally and internationally, NCURA serves its members and advances the field of research administration through cutting edge professional development programs.¹²

The UIPP brought together approximately 35 hand picked people from academia, industry, and the US Government. A significant strength was the wide breath of participants, representing small and large universities, small and large companies, and different sectors of the US economy. I was chosen as a delegate because of my legal expertise and experience working at research and non-research universities. The purpose was to discuss the university-industry relationship, ascertain what was working and what was not, and to establish deliverables which would strengthen these relationships.

In broad terms, the UIPP was focused on the following: 1) Turning challenges into successes. This means surmounting the primary challenges of contract negotiations and intellectual property into positive results; 2) Building trust and teamwork. In the first year of the project, it was readily apparent that there was significant distrust among some of the participants, either on a general level or based upon prior bad

¹¹ For additional information regarding the UIPP and UIDP, please see the appropriate sections of the *GUIRR 2006 Annual Report*. This report provides sections on the following: 1) Deemed Exports: Promoting Change on Critical National Issues; 2) *The Here or There?* Report: Bringing New Knowledge to the Debate Over Corporate R&D Globalization; 3) The University-Industry Partnership: An Action Agenda for More Effective Cooperation; 4) UIDP: A New Institution to Strengthen the US Research Enterprise; 5) Major Workshops and Convocations: Advancing National Science and Technology Policy; and 6) The Federal Demonstration Partnership (FDP): A Track Record of Success in Raising Research Productivity.

¹² National Council of University Research Administrators <<http://www.ncura.edu/>>.

experiences; 3) Defining and prioritising the issues. The participants needed to ascertain what the major problem areas were and deciding which ones needed to be addressed first; 4) Finding a ‘common cause’. This is primarily based upon building trust, finding common areas of concern and redress, and creating an action plan; 5) Developing flexibility. This is a recognition that university-industry partnerships, to be truly productive and long-term, must be flexible to meet future demands and changes of an internal and external nature; and 6) Building on existing efforts, such as the Business-Higher Education Forum (BHEF) publication ‘Working Together, Creating Knowledge’ and the Responsible Partnership Initiative by EARMA (European Association of Research Managers & Administrators).

A primary conclusion of this project was that negotiation of sponsored research agreements is a barrier to industry-university research collaboration in the United States. This barrier is exemplified by longer contract negotiation times, contentious negotiation processes, increasing costs resulting from the increase in length and contention, and little or no benefits resulting from the conclusion of the contract negotiation. This conclusion is not surprising given the efforts dedicated to the issue prior to the establishment of the UIPP. TurboNegotiator (TN)—the first demonstration project of the UIDP—is meant to start addressing this problematic area.

Another significant benefit from the UIPP was greater communication and understanding between the project participants and the institutions/sectors they represented. Whereas the first year represented significant distrust and strained conversations, by the last year significant progress was being made and the communication was more open and solution-focused. Calling this transformational change is not an overstatement.

By the time the UIPP ended with a national summit on April 23, 2006, the UIPP came up with two publications that reflected project deliverables: 1) *Guiding Principles for University-Industry Endeavors*, which articulated a preamble and guiding principles for such collaborations; and 2) *Living Studies in University-Industry Negotiations*, which illustrated a variety of successful and problematic partnerships. This document is cross-sectoral and represented a variety of private sector, university, and government actors. The ‘Living Studies’ publication also mapped perfectly with the ‘Guiding Principles’ publication, illustrating the

guiding principles in action. It is true that the *Living Studies* publication is primarily historical in nature. But it is equally true that these studies are meant to be learned from and applied to the present. That is the essence of what a 'living document' is.

UNIVERSITY-INDUSTRY DEMONSTRATION PARTNERSHIP (UIDP) AND TURBONEGOTIATOR (TN)

The conclusion of the UIPP at the national summit occurred simultaneously with the kick off of the UIDP as its successor project. Membership in the UIDP is dues-based, drawing on the idea that institutions that pay to belong within it have a vested interest to make the UIDP succeed. A membership drive for the UIDP started even before the national summit closing out the work of the UIPP. The membership drive, so to speak, continues to this day. The UIDP had its first meeting in December, 2006 and meets every quarter.

The UIDP was modelled after the Federal Demonstration Partnership (FDP), which began as the Florida Demonstration Project in 1986. The FDP is an association of federal agencies, academic research institutions with administrative, faculty and technical representation, and research policy organisations that work to streamline the administration of federally sponsored research.¹³ FDP members of all sectors cooperate in identifying, testing, and implementing new, more effective ways of managing more than \$15 Billion in federal research grants. The goal of improving the productivity of research without compromising its stewardship has benefits for the entire nation.¹⁴

Now 21 years old, the FDP is widely accepted as a success by universities and the federal government as being a model to drive institutional change on a national level. FDP continues to move forward, seeking to improve institutional stewardship of federal research money while ensuring the timely and expeditious conduct of research.

Taking the UIPP results into a concrete realm, and using over 20 years of FDP experience, the mission of the UIDP is to nourish and expand

¹³ The Federal Demonstration Partnership, *About FDP*
<http://www.uidp.org/ABOUT_UIDP.html>.

¹⁴ The Federal Demonstration Partnership, *About FDP*
<http://www.uidp.org/ABOUT_UIDP.html>.

collaborative partnerships between universities and industry in the United States. How will this mission be accomplished? The UIDP states:

The UIDP accomplishes this mission via a coalition of universities and companies who engage in voluntary collaborative experiments or new approaches to sponsored research, licensing arrangements, and the broader strategic elements of a healthy, long-term university–industry relationship. Institutional experiments are chosen and jointly pursued by willing members when they have the potential to increase the level, degree, or ease of university–industry collaboration. A primary focus for the UIDP’s initial work will be on streamlining intellectual property negotiations.¹⁵

Forty-nine universities and 20 companies comprise the UIDP as of 6 August 2007. The National Science Foundation (NSF) is a Founder’s Circle Member, a category reserved for entities that make a substantial resource contribution to the UIDP. Other members in this category include Pfizer, Ex One, Hewlett Packard, the Kauffman Foundation, and the University of California–Los Angeles.

Benefits of the UIDP

The potential benefits of the UIDP include:

- Improve the research relationship between universities and industry (the focus right now is not on licensing existing university technology funded by the federal government).
- Attract more industry investment into American universities.
- Improve American innovation and competitiveness in a knowledge-based global economy.
- Delivering solutions, not just talk.

¹⁵ University–Industry Demonstration Partnership, *About UIDP*
<http://www.uidp.org/ABOUT_UIDP.html>.

UIDP Characteristics

The UIDP focuses on *collaborative* beta-testing of new approaches to sponsored research, licensing arrangements, and strategic university-industry partnerships. Working groups will be focused on designing institutional experiments.

In addition to these practical, project-related initiatives, UIDP is a forum for the wide dissemination of the latest news, best practices, etc in the area of university-industry collaboration. Institutions that join the UIDP not only belong to demonstration projects; they are part of a broader forum designed to enhance collaboration.

One of the unique characteristics about the UIDP is that it requires a paradigm shift. Whereas the current/past paradigm is characterised by *policy-based contract negotiation* (e.g., the partners have IP policies that drive terms and conditions in agreements), the new paradigm requires a *principle-based paradigm*, one that is characterised by the partners determining the parameters that should be considered in selecting appropriate contract terms and conditions.

It was recognised during the UIPP and now the UIDP that contract negotiations must be conducted in a smarter manner. The knowledge of contract negotiators must be increased. To this end, contract negotiators should know more about the proposed project than just a written statement of work. Here are some of the questions that they should have the answers to:

- Why do the researchers want to work together?
- Who framed the problem that led to the proposed project?
- Who made the creative contributions to the statement of work?
- Who has Background IP that could have an impact on the proposed project?
- Who has key information or materials or prior research results needed for the project to happen?

In the end, though, the proposed contract terms and conditions should be appropriate for the facts of the situation. This illustrates another important theme of the UIDP and a lesson from the UIPP: there is/are no simple template-derived solution/solutions for these partnerships.

Remember, the template-focus best characterised the IRI/GUIRR efforts in the 1980s and 1990s.

Contract negotiators should also know the project parameters, including the following:

- Who had the idea for the research project (professor, sponsor, both simultaneously)?
- Who contributed background technology and background IP?
- Type and importance of non-financial contributions from sponsor (proprietary information, non-commercial materials, results from in-house research, etc.).
- Type and importance of non-labour contributions from the university (specialised equipment/facilities, building on prior research results, etc.).
- Nature of research (fundamental to applied, along a continuum).
- The scientific discipline(s) involved (biology, chemistry, biomedical engineering, civil engineering, etc.).
- The likelihood and/or expectation of inventions resulting from the proposed project.

In my professional career, I *always* endeavoured to learn as much as I could about a potential partnership in advance of negotiating an agreement. Perhaps that was my training as an attorney—negotiating without that information seemed to be negligence.

TURBONEGOTIATOR

The first UIDP demonstration project is TurboNegotiator, a tool to allow university and industry negotiators to rapidly navigate towards mutual agreement on intellectual property provisions (see the main UIDP web page, above). This initiative came out of the UIPP; the latter found that research agreements and intellectual property provisions were among the most significant impediments to past, present, and future collaboration between universities and companies. TN is currently in a

conceptualisation phase (Phase I). Beta testing of TN is at least a year away (late 2008 if not 2009).

The following steps give the reader a strong idea about how TN will work:

- Define and describe the 'Project Space'.
- Populate Project Space with examples of suitable agreement terms.
- Develop a questionnaire to probe parameters for the proposed project and use the answers to map the project into the corresponding sector in Project Space.
- Develop software that will guide the process further. This includes:
 - asking questions based upon input provided by project participants;
 - using responses to map project to a sector within the Project Space; and
 - providing sample agreement terms for that sector (which may include explanations and the positives/negatives for such terminology choices).

As the reader reads on, he or she will see that TN, in theory and in practice, is a multifaceted tool.

TN is a rational basis for building an agreement that accurately reflects the project parameters and what the partners want. It uses example terms as the starting place for negotiations. TN is also a process rather than a solution; it improves understanding of needs and contributions. More importantly, it is an educational process from which all contract negotiators will benefit.

TN is interactive. It will encourage discussion and include input from all key stakeholders. All relevant parties to the agreement should answer the questions. This includes faculty, company researchers, and contract negotiators from all sides involved in the negotiation.

TN is constructive. It suggests terms that are fair and reasonable, and results in less time for negotiation. Projects commence earlier, which is in all everyone's interests. TN will include a time-to-agreement metric,

similar to a tickler file but more sophisticated. This latter component can be an excellent managerial tool to spur quality and time improvements. Quality and speed of negotiation should be the goals and passion of all contract negotiators, regardless of institutional affiliation.

WHAT TURBONEGOTIATOR IS NOT

TN is not a *proscriptive* tool. It does not provide the *right* answer or the *only* answer. *It is not coercive.* If either party is not happy with the outcome, the parties can always walk away from the negotiation or take a different approach or attitude. Maybe the parties have not answered the questions honestly or completely-though this is critical for TN success.

TN does not force or mandate a win-lose outcome. TN seeks to forge agreements that result in productive research, meets the missions of the parties, and possibly lead to long-term relationships. In the end, TN seeks to foster mission compatibility on a project-by-project basis with the desirable outcome of spurring greater thought towards future collaboration.

SUMMARY FEATURES OF TURBONEGOTIATOR

These are the major summary features of TN, given the current status of the project:

- TN has the ability to quickly craft an individualised agreement that allows the research to move forward while meeting the mission needs of each party. Remember the signed contract is a means to the end (the research). It is not the ultimate end, in and of itself.
- TN accepts that contract negotiators are under-trained; hence the focus on TN as being a hands-on resource and tool. Education is critical to research administrators and corporate negotiators alike. While it is commonly assumed that delays to contract completion are due to delays on the university side, the author has found during his professional career that delays also happen as frequently on the corporate side.

- TN requires parties to agree on project scope before proceeding to clause selection. While this sounds like common sense (and is), it seems harder in reality. As a contract negotiator, I always nailed down the project scope before negotiating terms and conditions. As an attorney, it always seemed to me to be negligent to negotiate in the absence of necessary technical/project information.
- TN measures its own success by a ‘time to agreement’ module. As mentioned earlier, timeliness—along with quality—are the paramount goals of contract negotiation. And there are some areas of contract negotiation, like clinical trial agreements, where time is of the essence. When solving or mitigating medical ailments, not to mention the human subject protocol dimension, it behoves the contract negotiators on all side to reach agreement quickly so that the medical research can go forward.

CONCLUSION

What then can be concluded from TN and the broader forum that is the UIDP? One major point is that both represent incremental improvements to the university-industry partnership in general. There have been efforts in the past to improve this relationship, but they never seemed to permanently provide a forum for ongoing discussion and problem resolution. Good intentions are half the battle, but concrete steps are more important. The world of collaboration is changing rapidly, much more rapidly than in the 1980s and 1990s. Economic, political, and socio-cultural change impacts these relationships. It was logically necessary that a permanent forum be built to tend to this relationship. This is where the UIDP comes in.

Second, both represent a solution-based, incremental focus on university-industry collaboration. There is a time for talk and a time for action. TN in particular represents the action component though the more discussant-focused nature of UIDP. The forum component is equally necessary in a broader context.

Third, TN needs more development but represents a strong move forward. As has been stated earlier, TN is initially designed to handle two-party agreements representing discrete research projects. It is not

initially designed to handle multi-party negotiations nor umbrella projects or master agreements. Obviously, continued development of TN in the latter areas is advisable as those are significant areas within the overall relationship. Also, has been recognised, all sectors of private business need to be represented in the UIDP to be particularly effective.

Another major conclusion is that education and training remain important to professionals, particularly contract negotiators, in both sectors. Skill levels of contract negotiators in both sectors vary greatly, and this variance must be closed. This variance has been recognised by participants in both sectors, and this is a positive step. NCURA has recognised this dimension through its program offerings.

Lastly, communication remains critical. This is a common sense conclusion, but if it was that easy, why hasn't communication been more effective? An analogy to the world of divorce law seems appropriate. As an attorney who has handled divorce cases, I can testify to the importance of tending to the entire relationship, not just discrete aspects of it. This is equally true of university-industry collaboration. It is my conclusion that the UIDP forum and TN will play integral roles in the continued strengthening of communication among and between university and industry partners.

Perhaps the following is also needed, as articulated by Thomas A. Stewart, editor of the *Harvard Business Review*:

You cannot manage for the long term unless you can make room in your head, and your company's collective head, to think, plan, and execute over a multiyear time span, even while tending to inevitable (and important) distractions.¹⁶

Does your university's leadership have these attributes? Does your company's leadership possess such attributes?

As the title of this chapter indicates, the UIDP and TN are incremental improvements to improving university-industry collaboration. It is hoped that this incremental process continues well into the future, to such an extent that it becomes second nature to develop and 'close the deal' on such partnerships.

¹⁶ Thomas A Stewart, 'What the Long Term Takes' (July-August 2007) *Harvard Business Review* 12.