

WHY DON'T ENGINEERS GIVE BACK? THE GROWTH OF PRO BONO ACTIVITY WITHIN THE LEGAL INDUSTRY AND HOW THIS MAY BE EMULATED IN ENGINEERING

An individual's view of professional responsibility differs across industries, societal context and personal beliefs; however many engineers would not include a duty to serve their community in their idea of professional responsibility. Engineering projects provide infrastructure, breakthrough technologies and many everyday commodities and yet their important role within society is overwhelmingly directed to commercial profit. It is interesting to compare this to the legal industry where pro bono activities are commonplace. Many legal firms devote significant amounts of employee time to pro bono activities and the existence of dedicated public interest legal centres demonstrate the demand for these services. This paper will examine reasons why the engineering sector does not engage in engineering related pro bono activity and conclude that it is in an early stage of developmental activity. The legal industry is concluded to have progressed to an institutionalised stage of pro bono activity, which will not be emulated in the engineering industry without the same external influences present in the legal sector, such as government incentives, adequate education and appropriate infrastructure.

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I INTRODUCTION

The legal industry has a proud tradition of pro bono activity, the Australian Bureau of Statistics (ABS) reports that over 2007-08, Australian lawyers provided at least \$238.2 million in pro bono legal services. The legal sector is one of the few industries that can be proud of its application of specialised knowledge to help those in need. Engineering underpins society's infrastructure and therefore engineers possess specialised skills that can affect a community's standard of living, yet engineers have not stepped up to adopt pro bono services, with 'a perceived lack of a pervasive voluntary service spirit in the engineering profession.'¹ The motivations and progression of pro bono services in the legal and engineering communities through a '*developmental*' stage to one that is '*institutionalised*' will be examined in order to categorise engineering pro bono activity as being in an early *developmental* stage. In this *developmental* stage, engineers have yet to give back on a scale seen in the legal industry because there is no instilled culture that identifies a professional responsibility to do so. It is argued that this culture will only be instilled through the intervention of external factors to institutionalise the culture of pro bono activity in the engineering industry.

II THE PROFESSION OF LAWYERS AND ENGINEERS

The professions of lawyers and engineers differ in the particulars of services that are provided; however the industries have a number of similarities. The legal profession provides services relating to the law and its applications; including providing advice as to the current interpretation of the law, drafting documents for a commercial business or an individual and litigating. The engineering profession provides services relating to the application of science to fields of endeavour. Engineers provide the expertise to design and

¹ Kevin M. Passino, 'Volunteerism and Humanitarian Engineering - Part 1', *IEEE Technology and Society Magazine* (New Jersey), Winter 2009, 4.

construct infrastructure such as: roads; transport; buildings; electricity, gas and water supply and technology innovation. Both professions are sought to assess and solve a problem; for lawyers it is the tactics, arguments and processes to win the legal battle, for engineers it is the formulae, conversions and design to produce the desired product or outcome. Clients in both industries range from governments, companies and community organisations, to individuals. Practice areas in both industries also encompass a myriad of specialties, ranging from: criminal, administrative, constitutional, tort, family, property, and tax law; and mechanical, civil, chemical, environmental, aerospace and electrical engineering. Both require tertiary education to gain membership, both have Professional Codes of Conduct and monopoly over their services.²

The industries are of a similar magnitude in Australia, with the ABS reporting that there were 36 124 solicitors and barristers employed in Australia, who generated \$10 636 million in income over the 2001-02³ financial year.⁴ In comparison, the ABS found that there were 26 680 engineers employed by engineering consulting services businesses, with these businesses drawing \$9 342 million in income over the 2001-02 financial year.⁵ The professions both hold an important place in current society, with engineers responsible for major infrastructure and technological development,⁶ whereas 'the rule of law is the

² See, eg, John Western, Toni Makkai and Kristin Natalier, 'Professions and the Public Good' (2001) 19 *Law in Context* 21, 22-3, John Western et al, 'Characteristics and benefits of professional work: Assessment of their importance over a 30-year career' (2006) 42(2) *Journal of Sociology* 165, 166-8, Brian E Lloyd (ed) et al, *Engineering the Future: Preparing Professional Engineers for the 21st Century* (2001) 2.

³ In comparing the two industries, 2001-2002 constituted the most recent ABS statistics conducted on both the engineering and legal profession in the same year.

⁴ Australian Bureau of Statistics, *Legal Practices, Australia, 2001-02* (25 June 2003) <<http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/6873E6FC08AB80C1CA2575DE0019BF6D?opendocument>> .

⁵ Australian Bureau of Statistics, *Consultant Engineering Services, Australia, 2001-02* (3 July 2003) <<http://www.abs.gov.au/Ausstats/abs@.nsf/e8ae5488b598839cca25682000131612/0e508767524d820cca2568a900139369!OpenDocument>> .

⁶ Francis A Kulacki, 'The Future of Callings - An Interdisciplinary Summit on the Public Obligations of Professionals Into the Next Millenium: Engineering, Engineers and the Public Good' (1999) 25 *William Mitchell Law Review* 157, 167.

fundamental protection that gives people and organisations confidence that society's rules will be respected and upheld.⁷

The professions of lawyers and engineers share many characteristics; they both have important roles in society, they serve a similar client base, are of a relative magnitude in size, have similar entry requirements and are service oriented. Given these similarities, it is interesting to note the difference between the two industries in regards to the provision of pro bono service. Lawyers have a longstanding tradition of providing pro bono services, however, as will be explored in this paper, engineers generally have not conducted pro bono activity.

'*Pro bono publico*', for the public good, is a concept with no universal definition; with governments, firms, community organisations and individuals utilising differing definitions.⁸ The widely utilised Law Council of Australia definition includes: representation of a client or community organisation without fee, or on a reduced-fee basis if in the public interest or if the client has no other means of obtaining legal advice, free community legal education and law reform activities.⁹ For clarity and the purposes of this paper, pro bono services are considered to be those that are conducted free of charge or on a reduced fee basis.¹⁰ It is interesting to note that the Latin translation of *pro bono publico* makes no reference to a particular industry, however the term is overwhelmingly used in relation to legal services, for example the Australian Government's National Pro Bono

⁷ Attorney-General's Department (Cth) Access to Justice Taskforce, 'A Strategic Framework for Access to Justice in the Federal Civil Justice System' (2009) 1.

⁸ See, eg, Jill Anderson, 'The Australian Pro Bono Manual. A practice guide and resource kit for law firms' (2003) 6.

⁹ See Law Council of Australia, 'Pro Bono Publico - For the Public Good' (Law Council of Australia, 1995) 1.

¹⁰ The inclusion of 'reduced fee basis' in the definition incorporates the provision of reduced fee services conducted by small firms or sole practitioners which is all they can afford due to their size, see National Pro Bono Resource Centre, 'Mapping Pro Bono in Australia' (National Pro Bono Resource Centre, 2007) 3. The complications caused by differing definitions will not be explored in this paper, however it is recognised that this is statistically problematic and will be encountered in all areas of 'pro bono' activity, whether in law, engineering or other industries and therefore constitutes an area for further research.

Resource Centre is focussed solely on the legal industry.¹¹ The use of the term 'pro bono' and pro bono service in other professions is not the focus of this paper; however the provision of pro bono service in other industries (demonstrating that the ability to conduct pro bono activity is not limited to the legal profession) is noted.¹² Pro bono activity in the legal sector takes many forms, different activities include: no-fee clients in the firm's practice area, providing assistance to community or non-profit organisations, community education, phone advice, client sharing with community organisations, outreach services, secondments and many others.¹³ Many of these pro bono activities translate to the engineering sector with its similar client service focus to the legal industry. Engineers have the capacity to take on clients in the firm's practice area, for instance: in the independent assessment of environmental impact statements for people affected by government projects such as a desalination plant, provision of building design such as provided by employees of Bovis Lend Lease to an Asylum Seekers Centre,¹⁴ partnerships with community organisations to provide advice on projects such as a watering network for a community farm, outreach services to remote areas, or secondments of a project manager or construction supervisor to oversee works.

The professional occupations of law and engineering require tertiary education, specialised skills, knowledge and industry accreditation. Membership of the legal and engineering profession involves education additional to that obtained at a tertiary level, a commitment to

¹¹ National Pro Bono Resource Centre, *Home* (2 June 2010) <<http://www.nationalprobono.org.au/home.asp>> .

¹² Lawyers are not the only profession providing their specialised skills in pro bono activities. *Medecins sans Frontieres* (MSF) is well known around the world for providing those in need with trained doctors who volunteer their time. The health profession is supportive of pro bono activity, for example an American study found 39 per cent of physicians volunteered in a health-related capacity in 2003, see David Grande and Katrina Armstrong, 'Community Volunteerism of US Physicians' (2008) 23(12) *General Internal Medicine* 1987, 1987. Architects are analogous to engineers in the skills utilised in design and construction. Architects are also performing pro bono services, with the American Institute of Architect's 2000-02 Firm Survey shows 59 per cent of approximately 14 500 architect respondents nationwide for the year ending 1999 reported providing no-cost services to clients, see Jane F. Kolleeny, 'Giving versus getting: Altruism is alive and well in architecture. Practice Matters', 2003, 1. Clearly, the provision of pro bono services is undertaken by a broad range of professions.

¹³ National Pro Bono Resource Centre, 'Mapping Pro Bono in Australia' (National Pro Bono Resource Centre, 2007) 30-45.

¹⁴ David Cooke, *The Philanthropic Contract: Building Social Capital Through Corporate Social Investment* (Dissertation Thesis, Southern Cross University, 2008) 106.

the pursuit of knowledge and acceptance of a code of ethics.¹⁵ Camenisch argues that the privilege of autonomy granted to professions by society carries a moral duty and therefore society has a licence to hold the professions and their members accountable for their actions.¹⁶ Codes of ethics are a mechanism through which the values and moral norms of the profession and its members are represented to society and the wider community and therefore play an important role in establishing, affecting and upholding the relationship between the profession and society.¹⁷ The early draft of the American Bar Association's Model Rules of Professional Conduct in 1980 included a mandatory requirement of pro bono activity, however it was removed in the final publication due to concerns of enforcement and the effect that it would have on the traditionally voluntary nature of the ethical obligation. Subsequently, many US States included reference to pro bono activity in their legal ethics code.¹⁸ The Law Society of New South Wales Statement of Ethics states 'we primarily serve the interests of justice.'¹⁹ Interestingly, the engineering profession also recognised public service; in 1948 the Engineer's Council of Professional Development included 'rendering gratuitous public service in addition to that engaged by clients' in their characteristics of a professional.²⁰ Since 2007, the National Society of Professional Engineers in America states that '[e]ngineers shall at all times strive to serve the public interest.'²¹ The Institute of Engineers, Australia 2000 Code of Ethics contains a cardinal principal of acting in the interests of the community; its first tenet states that '[m]embers

¹⁵ See, eg, Engineers Australia, *Benefits of Engineers Australia Membership* (2010) <<http://engineersaustralia.org.au/ieaust/index.cfm?0F99A223-93C3-8761-466B-E39F6D81C6EA>> , Law Institute Victoria, *The value of LIV membership* (2009) <<http://liv.asn.au/Membership/Join-the-LIV/The-value-of-LIV-membership>> .

¹⁶ Paul F Camenisch, *Grounding Professional Ethics in Pluralistic Society* (Haven Publications, 1983) 45.

¹⁷ Mark S Frankel, 'Professional Codes: Why, How, and with What Impact?' (1989) 8 *Journal of Business Ethics* 109, 110.

¹⁸ Jeremy Miller and Vallori Hard, 'Pro Bono: Historical Analysis and a Case Study' (1994) 21 *Western State University Law Review* 483, 483.

¹⁹ The Law Society of New South Wales, *Statement of Ethics* (2009) <http://www.lawsociety.com.au/ForSolicitors/professionalstandards/Ethics/statement_of_ethics/026278> .

²⁰ Engineers' Council for Professional Development, *The most desirable personal characteristics; an exploration of opinion and a report from the Sub-committee on Student Development* (1948).

²¹ National Society of Professional Engineers, *NSPE Code of Ethics for Engineers* (2010) <<http://www.nspe.org/Ethics/CodeofEthics/index.html>> .

shall place their responsibility for the welfare, health and safety of the community before their responsibility to sectional or private interests, or to other members.’²² Overall, the professional bodies of lawyers and engineers have recognised the responsibility of their members to the public, however engineers (unlike lawyers) have not recognised that this responsibility extends to the provision of pro bono services.

III PROGRESSION OF PRO BONO ACTIVITY IN THE LEGAL SECTOR

A. Developmental

Pro bono activity is a longstanding tradition of the legal sector.²³ In Australia, developments in legal pro bono activity have been described by the National Pro Bono Resource Centre as ‘ad hoc’²⁴ and carried out ‘in an unstructured – even disorganised – manner.’²⁵ Statistics on the rates of pro bono activity in the years preceding 2000 are limited; a 1999 survey by Voluntas found that less than 10 per cent of those undertaking pro bono activity kept accurate records of their work, with a written pro bono policy used by only 11 per cent of Victorian practitioners.²⁶ The unstructured and unreported nature of this work is arguably a reflection of the individualistic basis upon which the activity was undertaken, with little concern for the marketing potential or wider recognition of such work. Despite this unstructured manner, the provision of pro bono services in Australia over 1998-99 reported

²² The Institution of Engineers Australia, ‘Code of Ethics’ (The Institution of Engineers, Australia, 2000) <http://www.engineersaustralia.org.au/shadomx/apps/fms/fmsdownload.cfm?file_uuid=F0647595-C7FE-7720-EA17-70AC27062E0B&siteName=ieaust>.

²³ For an analysis of the growth of pro bono activity since the 13th Century, see Jeremy Miller and Vallori Hard, ‘Pro Bono: Historical Analysis and a Case Study’ (1994) 21 *Western State University Law Review* 483, 484. For a concise analysis of the fragmented approach to pro bono activity in the United States of America since 1900, see Deborah L Rhode, ‘Pro Bono in Principle and in Practice’ (2005) 26 *Hamline Journal of Public Law and Policy* 315.

²⁴ National Pro Bono Resource Centre, Mapping Pro Bono in Australia, above n 13, 1.

²⁵ David Weisbrot, ‘Introduction to Report of the National Pro Bono Task Force and Recommended Action Plan’ (2001) *Law in Context* 214, 221.

²⁶ Voluntas Pro Bono Secretariat, *Pro Bono Survey Report*, June 1999, 1.

by solicitors and barristers was found to constitute almost 2.29 million hours of pro bono work.²⁷

In examining the prevalence of pro bono activity within the legal sector, the motivations of individuals and corporations are extremely important. The legal industry has been motivated to undertake pro bono activity for many reasons: loyalty to a client in need, personal and career development opportunities, religious considerations, a sense of Kantian duty, the service ideal, access to justice and commitment to ethical codes.²⁸ While there are many personal motivations for undertaking pro bono activity, the sense of professional responsibility is emphasised by many who maintain that lawyers have a duty to the community in return for the monopoly over legal services that the community has facilitated.²⁹ Parker argues that the privileges and exclusivity flowing from the ability of lawyers to act as gatekeepers of the law brings an obligation to those requiring help and can be likened to a social contract to which the community and lawyers are parties.³⁰ Access to justice is a central tenet of the law, with an underlying principle that the law will treat every person equally and therefore every person has a right of legal representation.³¹ The Victorian Attorney General, Rob Hulls MP, recently stated that pro bono 'is central to the profession's core value of providing access to justice'.³² In providing pro bono services,

²⁷ Australian Bureau of Statistics, *Legal Services Industry, Australia, 1998-99* (18 August 2000)

<<http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/8667.0Main+Features11998-99?OpenDocument>> . Note that the 1998-1999 definition included legal aid in its statistics. The 2007-2008 data constituted 2.1 million hours of legal aid work and an additional 955,400 hours of pro bono work under a more restrictive definition, see Australian Bureau of Statistics, *Pro Bono Work and Legal Aid* (24 July 2009) <<http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/8667.0Main+Features82007-08>>

²⁸ Stephen Parker, 'Why Lawyers Should Do Pro Bono Work' (2001) 19 *Law in Context* 5, 6-11.

²⁹ See, eg, Y Ross, *Ethics in Law* (3rd ed, Butterworths, 2001) 109, Stephen Parker, 'Why Lawyers Should Do Pro Bono Work' (2001) 19 *Law in Context* 5, 9, Mirko Bagaric and Penny Dimopoulos, 'Legal Ethics Is (Just) Normal Ethics: Towards a Coherent System of Legal Ethics' (2003) 3(2) *Queensland University of Technology Law and Justice Journal* 367, Kristen Hilton and Hugh De-Kretser, 'Working hard for the needy', *The Age* (online), June 24 2008, <<http://www.theage.com.au/opinion/working-hard-for-the-needy-20080623-2vjf.html>>.

³⁰ Parker, above n 28, 9.

³¹ Miller and Hard, above n 18, 484.

³² Attorney General of Victoria, 'Attorney General to review government legal services' (Media Release, 17 February 2000).

lawyers are addressing the deficiencies of access to justice and are fulfilling their professional responsibility to society.

The period in Australian legal history up until the late 1990's can be viewed as a '*developmental*' stage in legal pro bono activity, characterised by an unstructured system with a lack of accurate records or statistics and pro bono services delivered on largely an individual basis. In the *developmental* stage, the primary motivation is an individual's sense of professional responsibility to give back to society, with an instilled culture across the industry resulting in a significant amount of pro bono service.

B. Institutionalised

1. Infrastructure

The 'ad-hoc' nature of pro bono activity in the Australian legal industry presented opportunities to improve collaboration and improve access to pro bono services, prompting the profession into further action.³³ In response to concerns over inadequate access to justice, the first Australian formal pro bono community referral scheme was developed in 1992 and subsequently referral centres and assistance schemes have been established around Australia.³⁴ This approach has streamlined a previously unstructured approach; solicitor Mark Woods notes 'by centrally organising the work the profession hopes to meet some of [the need] in a much more effective way.'³⁵ It was not simply the provision of services that was important, but the collaboration and infrastructure that more adequately addressed the accessibility of pro bono legal services.

The Federal Government also recognised the importance of a structured approach by establishing a National Pro Bono Resource Centre (NPBRC) to foster pro bono activity in

³³ See, eg. Australian Government Attorney-General's Department, 'Federal Civil Justice System: Strategy Paper' (December 2003) 115-8, David Weisbrot, 'Report of the National Pro Bono Task Force' (Australian Law Reform Commission, 2001) 1-4.

³⁴ National Pro Bono Resource Centre, 'History of Australian Pro Bono Referral Schemes' (National Pro Bono Resource Centre, 2006) 5.

³⁵ *Ibid* 35.

2002, drawing on the recommendations of the National Pro Bono Task Force.³⁶ The NPBRC's 'National Pro Bono Aspirational Target', launched in 2007, and had 66 signatories representing approximately 4600 legal professionals committing to over 35 hours of pro bono activity per annum in 2009.³⁷ The target of 35 hours was found to increase pro bono practice in the firms, provided an industry-wide yardstick whilst building awareness of disadvantage and the importance of providing and reporting pro bono activity.³⁸

2. Corporate Involvement

Involvement of legal firms in pro bono activity has increased, encouraged by government incentives, industry targets and greater public awareness. Gilbert and Tobin is credited with employing the first pro bono coordinator in 1996 and many firms followed suit; in 2006 there were over 27 firms with listed pro bono coordinators.³⁹ The Victorian Government's Legal Services 2006-07 Annual report notes that the most successful firms conducting pro bono work utilise a coordinator to oversee the program.⁴⁰ Structured community referral programs are also attractive to corporate firms; in 2006 there were 27 firms who were members of the Public Interest Law Clearing House (PILCH)⁴¹ Victoria and 29 in New South Wales.⁴² Membership of organisations such as PILCH brings obligations which firms are able to incorporate into their budget and hiring policies. Through the provision of services through PILCH, many firms have built relationships with community legal centres or non-profit organisations which have then formed independent 'multi-tiered

³⁶ National Pro Bono Resource Centre, Mapping Pro Bono in Australia, above n 13, 6-8.

³⁷ National Pro Bono Resource Centre, 'Second Performance Report on the National Pro Bono Aspirational Target' (UNSW, 2009) 2.

³⁸ *Ibid.*

³⁹ National Pro Bono Resource Centre, Mapping Pro Bono in Australia, above n 13, 14.

⁴⁰ Department of Justice, 'Government Legal Services Annual Report 2006/2007' (Victorian Government, 2008) 9.

⁴¹ See PILCH, *About* <<http://www.pilch.org.au/>> for more information.

⁴² National Pro Bono Resource Centre, History of Referral Schemes, above n 34, 45.

relationships'.⁴³ These collaborations have included providing legal advice or representation, research, drafting law reform submissions or providing training to the community.⁴⁴

In adopting the legal profession's duty to give back to society, law firms can see benefits in practical, tactical and ethical areas.⁴⁵ Pro bono activity gives employees opportunities to learn different areas of the law and broaden their knowledge.⁴⁶ It increases job satisfaction, enhances the culture of the business, captures the attention of talented graduates, provides secondment opportunities and creates positive publicity for the firm and lawyers in the community.⁴⁷ Structured programs and voluntary industry targets also provide positive marketing opportunities, in the United States, 160 of the largest 185 firms in 2003 had signed up to a 'Pro Bono Challenge', in which results and ranking are published by magazines and interest groups. The rankings have been important in attracting clients and recruiting talented employees.⁴⁸ Law firms in Australia proudly proclaim their status as a signatory to the 'National Pro Bono Aspirational Target' on their websites.⁴⁹ Firms are also reporting that prospective clients are questioning the details of their pro bono program, highlighting the importance of reputation in not only a company's business, but also the reputation of companies it chooses to do business with.⁵⁰ In providing pro bono services,

⁴³ National Pro Bono Resource Centre, 'Working Together: Multi-Tiered Pro Bono Relationships Between Law Firms and Community Legal Organisations' (2003) 2 ('*Working Together*').

⁴⁴ *Ibid* 2-3.

⁴⁵ Parker, above n 28, 6-8.

⁴⁶ National Pro Bono Resource Centre, 'Working Together', above n 43, 4.

⁴⁷ Parker, above n 28, 7.

⁴⁸ Terry Carter, 'Building a Pro Bono Base' (2003) 89(6) *American Bar Association Journal* 30, 32.

⁴⁹ See, eg, Allens Arthur Robinson, *pro bono* (2010) <<http://www.aar.com.au/comm/probono.htm>> , Clayton Utz, *Our Pro Bono Practice* (2010) <http://www.claytonutz.com/community/pro_bono/home.page> .

⁵⁰ Chris Merritt, 'Top guns pitching into pro bono work', *The Australian* (online), August 14, 2009, <<http://www.theaustralian.com.au/business/legal-affairs/top-guns-pitching-into-pro-bono-work/story-e6frg97x-1225761161793>>.

law firms have embraced the legal profession's duty to give back to society whilst being perceived as good corporate citizens⁵¹

3. *Government Incentives*

Another motivation for corporate activity in the legal sector has been government incentives. Since the adoption of measures in 2002, eligibility for the Victorian Government's Legal Services Panel requires a commitment of 5-15 per cent of the fees derived from Government work to be utilised on pro bono activity. In 2007 alone, this resulted in \$7.7 million of services.⁵² The Federal Government has preferred not to mandate for pro bono activity in the legal services it retains, instead encouraging activity by requiring its agencies to consider the amount and type of pro bono work undertaken by the law firm offering services, or taking account of whether the firm has signed on to the National Pro Bono Aspirational Targets.⁵³ The traditional motivation of a personal professional duty to society has been reinforced through the motivations of the corporate firms which are incentivised by tangible benefits including government incentives. The motivations are mutually beneficial, as corporate firm involvement is strengthened and perpetuated by individuals who identify with their sense of professional responsibility, and the expectation of pro bono activity in the careers of lawyers instils a sense of responsibility and professional duty to serve society in lawyers, law students and the community.

Pro bono legal services in Australia have been '*institutionalised*' through the infrastructure of community referral schemes, a government established organisation to push the agenda of pro bono activity, wider recognition, corporate firm involvement and government incentives. The institutionalisation of pro bono activity has reinforced the instilled culture

⁵¹ Elisabeth Wentworth, 'Barriers to Pro Bono: Commercial Conflicts of Interest Reconsidered' (2001) 19 *Law in Context* 166, 175.

⁵² Department of Justice, 'Government Legal Services Annual Report 2006/2007' (Victorian Government, 2008) 1.

⁵³ This was manifested through an amendment in September 2008 by the Australian Government to the *Legal Services Directions 2005* (Vic), see Senate Legal and Constitutional Affairs Committee, 'Access to Justice' (2009) <http://www.aph.gov.au/SENATE/committee/legcon_ctte/access_to_justice/report/c02.htm> Chapter 2.

within individuals of the legal profession and has provided mechanisms for corporate engagement, resulting in widespread activity across the industry at a corporate level.

IV COMPARISON OF THE PRO BONO ACTIVITY PROGRESSION IN THE ENGINEERING SECTOR

In comparing the current pro bono activity of the legal industry to that of the engineering sector, it can be concluded that engineering is in the infancy of the *developmental* stage of pro bono progression. The *developmental* stage in the legal sector was characterised by a lack of recording, celebration of activity, statistics and supporting infrastructure; whilst being motivated on an individualistic basis in response to a duty of professional responsibility.

Currently in engineering, pro bono involvement is on a small scale and a predominantly individual basis. Organisations such as Engineers Without Borders Australia (EWB) and Registered Engineers for Disaster Relief (RedR) provide opportunities for engineers to volunteer their skills with disadvantaged communities or in areas of need.⁵⁴ The numbers and the duration of service of RedR volunteers vary depending on the amount of relief that needs to be provided, however the maximum number of volunteers in any year was 92, with an average before 2004 of 30.⁵⁵ EWB facilitated 39 volunteers to work on projects in 2007-08 and 49 volunteers over 2008-09 (for three to 12 month durations).⁵⁶ In comparison, the

⁵⁴ Engineers Without Borders Australia, *About EWB* (2010) <<http://www.ewb.org.au/about/aboutewb/>> , Registered Engineers for Disaster Relief, *Our Work* (2010) <<http://redr.org.au/about-us/about-our-work.html>> .

⁵⁵ Registered Engineers for Disaster Relief, *Our Work* (2010) <<http://redr.org.au/about-us/about-our-work.html>> .

⁵⁶ Engineers Without Borders Australia, *Annual Report 2007-2008* (2010) <<http://www.ewb.org.au/about/media/>> , Engineers Without Borders Australia, *Annual Report 2008-2009* (2010) <<http://www.ewb.org.au/about/media/>> .

955 400 hours of pro bono legal activity quantified by the ABS over 2007-08⁵⁷ represents the time of approximately 500 full time employees.⁵⁸

A lack of accurate records and widespread statistics within engineering pro bono work is evident. Research was conducted for the purposes of this paper and canvassed industry collated statistics, company annual reports and websites, published articles of academia and the wider media. Very little material that involves pro bono engineering or even mention of volunteerism within the engineering industry was located.⁵⁹ In comparing websites and publications of six major law firms⁶⁰ to that of six major engineering services firms,⁶¹ all 12 display established 'community giving' programs. All of the law firms sampled mention and many publicly quantify their pro bono hours, whereas of the engineering firms, SKM and Aurecon were the only firms to mention 'pro bono' or the donation of 'professional services.'⁶² The engineering firms that did mention pro bono did so in passing reference, without quantified hours or measures of financial worth, as compared to many of the law firm websites that quantify hours dedicated or the monetary value this work represents. For instance, reported pro bono hours in 2008 ranged from 15 562 of Minter Ellison to 40 800 of

⁵⁷ Australian Bureau of Statistics, *Pro Bono Work and Legal Aid* (24 July 2009) <<http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/8667.0Main+Features82007-08>> .

⁵⁸ Calculated on a 40 hour week, for 48 weeks of the year.

⁵⁹ See eg, a google search for "pro bono engineer" returned 46 results worldwide, as compared to pro bono law at 17,000, Google, "*pro bono engineer*" (24 April 2010) <http://www.google.com/search?source=ig&hl=en&rlz=1G1GGLQ_ENAU291&q=%22pro+bono+engineer%22&aq=f&aqi=g10&aql=&oq=&gs_rfai=>> , Google, "*pro bono law*" (24 April 2010) <http://www.google.com/search?hl=en&rlz=1G1GGLQ_ENAU291&q=%22pro+bono+law%22&aq=f&aqi=&aql=&oq=&gs_rfai=>> .

⁶⁰ Clayton Utz, *Our Pro Bono Practice* (2010) <http://www.claytonutz.com/community/pro_bono/home.page> , Blake Dawson, *Pro Bono Program* (2010) <http://www.blakedawson.com/Templates/Generic/x_generic_content_page.aspx?ID=17157> , Mallesons Stephen Jaques, *Pro bono advice* (2009) <<http://www.mallesons.com/community/5502317W.htm>> , Freehills, *Our community - Freehills Foundation* <<http://www.freehills.com.au/2549.aspx>> , Allens Arthur Robinson, *pro bono* (2010) <<http://www.aar.com.au/comm/probono.htm>> , Minter Ellison, *Investing in our community* (2010) <<http://www.minterellison.com/public/connect/Internet/Home/Community/>> .

⁶¹ WorleyParsons, *Community* (2008) <<http://worleyparsons.com/AboutUs/community/Pages/default.aspx>> , GHD Australia, *Community Contributions* (2009) <<http://www.ghd.com/about-us/community-contributions/>> , Arup, *Communities and causes* (2010) <http://www.arup.com/About_us/Making_a_difference/Communities_and_causes.aspx> , Aurecon, *Helping the community* (2010) <<http://www.conwag.com/news/news.asp?pgID=36>> ; Sinclair Knight Merz, *SKM and the Community* (2010) <<http://www.skmconsulting.com/About-Sinclair-Knight-Merz/SKM-and-the-Community/>> , AECOM, *Social Responsibility* (2010) <<http://aecom.com/About/Social+Responsibility/>> .

⁶² Ibid.

Allens Arthur Robinson.⁶³ Another indicator of the low level of pro bono activity in the engineering sector is that only eight per cent of 785 community projects facilitated through the UK ProHelp organization over July to September 2006 were undertaken by Construction and Engineering firms.⁶⁴ Good company, an Australian organisation dedicated to matching companies and skilled volunteers with those in need does not feature an Engineering skill category.⁶⁵ The existence of a widespread culture of pro bono activity across engineering companies appears to be absent in Australia.

The insignificant volume of information surrounding engineering pro bono activity infers two possible conclusions: that it is not happening to a significant degree; or that it is happening but is not reported. The Arup Cause, an initiative of engineering services company Arup to provide volunteer opportunities for their engineers is an example of pro bono activity in the engineering sector. Details of the programme or case studies are not reported on the Arup website or their company report, the only evidence promoted by the company was located in a journal article by the CEO calling on other companies to participate in pro bono services.⁶⁶ This is a missed marketing opportunity for the company, although it may demonstrate the belief that pro bono activity is for the internal benefit of employees and the business' culture, not a differentiator to potential clients, applicants or the wider community. More information could be gained by surveying engineering companies in order to determine the nature and volume of corporate community giving activities currently undertaken by engineering services companies.

⁶³ See, eg, Minter Ellison, *Investing in our community* (2010) <<http://www.minterellison.com/public/connect/Internet/Home/Community/>> , Allens Arthur Robinson, *pro bono* (2010) <<http://www.aar.com.au/comm/probono.htm>> .

⁶⁴ Business In The Community, 'RICS and CIPR urge pro bono CPD support', *ProHelp News* (London), January 2007, 1, <www.bitc.org.uk/document.rm?id=4819> 3.

⁶⁵ See goodcompany Foundation, *goodcompany* (2007) <<http://goodcompany.com.au/>> .

⁶⁶ See Robert Care, 'Volunteering pays off - both for the involved engineer and the world they serve' (2008) 5(1) *Australian Journal of Civil Engineering* 39.

Providing access to justice is a predominant focus of legal pro bono activity whereas engineering does not currently have an 'access to engineering' theme. It may appear that there is currently very little demand for infrastructure projects from communities who require additional assistance outside of government provided engineering services, yet this may also reflect a demand that has not yet been voiced by communities or heard by engineers. The demand for engineering services may not be as obvious as the queues for pro bono legal services⁶⁷ but with over 2.5 billion people around the world without access to adequate sanitation, 1 billion who have no access to fresh drinking water and 1.6 billion who do not have access to electricity,⁶⁸ the opportunities for engineers abound. Collaboration on the design and implementation of water and sanitation infrastructure in areas without such supply, investigation of alternative appropriate technologies such as smokeless stoves for rural living in Nepal, the remediation of reclaimed indigenous land and the development of bio-digesters to capture waste of floating communities in Cambodia are examples of engineering projects undertaken by EWB volunteers.⁶⁹ Engineering services undertaken pro bono are needed by communities around the world; just as lawyers' services are required to address concerns of access to justice. Florman argues that '[i]ndividual engineers are uniquely qualified to perform *pro bono* work in their communities – and beyond.'⁷⁰

⁶⁷ See National Pro Bono Resource Centre, 'History of Pro Bono Referral Schemes', above n 34, 7-50.

⁶⁸ UN Department of Public Information, 'Goal 7: Ensure environmental sustainability: Fact Sheet' (United Nations, 25 September 2008) <<http://www.un.org/millenniumgoals/2008highlevel/pdf/newsroom/Goal%207%20FINAL.pdf>> 1.

⁶⁹ Engineers Without Borders Australia, *Kooma Water Management Project* (2010) <<http://www.ewb.org.au/explore/initiatives/koomawaterproject>> , Engineers Without Borders Australia, *Pro-Poor Renewable Energies Project* (2010) <<http://www.ewb.org.au/explore/initiatives/peedaenergyproject>> , Engineers Without Borders Australia, *Tonle Sap Floating Toilet Project* (2010) <<http://www.ewb.org.au/explore/initiatives/tonlesapfloatinglatrinesproject>> .

⁷⁰ Samuel C Florman, 'Engineering Ethics: The Conversation without End' (2002) Fall *Bridge* 19, 23.

V WHY HAVEN'T ENGINEERS *GIVEN BACK* AND WHAT COULD BE DONE?

A comparison of the motivations of lawyers and engineers to conduct pro bono activity reveals many similar motivations for activity. Just as lawyers have a monopoly over legal services, engineers also receive the benefits flowing from the exclusivity of services facilitated by the community, with Professional Engineers registered on a public database, the 'National Professional Engineers Register' (NPER). Legislation around Australia mandates for an NPER engineer to undertake specified services.⁷¹ Professional Engineers are also remunerated higher than their peers and able to accept higher responsibilities than other engineers or technicians.⁷² In return for this exclusivity and associated benefits of the profession, the 'Engineering the Future' report notes that the social contract contained in the traditional professional model requires that engineers commit to 'ethical behaviour and contribut[e] to community good, before self-interest.'⁷³ The engineering profession has not embraced this responsibility to give back to the community. On an industry-wide level this culture has not been instilled in engineering as it has been in the legal sector.

A. Absence of Education

A lack of volunteering opportunities is evident in engineering education at a university level. The accreditation body, Engineers Australia, does not include volunteerism or pro bono activity in its requirements of tertiary engineering education.⁷⁴ The equivalent law and medical schools require, or at the very least, encourage students to undertake pro bono

⁷¹ See, National Engineering Registration Board, *Regulatory Schemes* <<http://www.engineersaustralia.org.au/nerb/regulatory-schemes/introduction.cfm>> .

⁷² See, Engineers Australia, *Chartered Status: The benefits of Chartered status* (2010) <http://engineersaustralia.org.au/professional-development/chartered-status/chartered-status_home.cfm> .

⁷³ Brian E Lloyd (ed) et al, *Engineering the Future: Preparing Professional Engineers for the 21st Century* (2001) 137.

⁷⁴ Engineers Australia, *Program Accreditation* (2010) Engineers Australia <http://engineersaustralia.org.au/about-us/program-accreditation/program-accreditation_home.cfm> .

activities.⁷⁵ The legal profession recognises the importance of pro bono activity to the extent that law schools around the world are adopting mandatory service hours for their students.⁷⁶ These hours ensure that 'law students are trained in a way which assures their continued sensitivity to their ethical duties to society'⁷⁷ and begins to instil the duty of professional service to society in law students. Numerous studies have confirmed the importance of this inclusion in the students' recognition and awareness of their pro bono responsibilities.⁷⁸ In engineering there is also an absence of education in social justice and humanitarian engineering issues that would expose students to considerations of differing community cultures and practices, allowing students to reflect on how they may depart from their own.⁷⁹ In order to expect engineers to understand and heed their professional responsibility to give back to society, it is important that their university education begins to instil a culture of professional responsibility to society in engineering students.

B. Creative Leadership

The importance of strong leaders in developing pro bono programs has been recognised in the legal sector.⁸⁰ Jim Rohr states that '[t]he CEO has to be perceived as the leader of philanthropy.'⁸¹ The charismatic leader provides legitimacy to the activity, rendering it less vulnerable to criticism by others who may otherwise query the costs and benefits of such

⁷⁵ Kevin M Passino, 'Educating the Humanitarian Engineer' (2009) 15 *Science and Engineering Ethics* 577, 578.

⁷⁶ Miller and Hard, above n 18, 492.

⁷⁷ Ibid.

⁷⁸ See, eg. R. Granfield and L. Mather, *Private Lawyers and the Public Interest: The Evolving Role of Pro Bono in the Legal Profession* (2009) 53, 88, 115, Jeremy Miller and Vallori Hard, 'Pro Bono: Historical Analysis and a Case Study' (1994) 21 *Western State University Law Review* 483, Robert P Hesketh, C Stewart Slater and Mariano J Savelski, 'A Program to Help in Designing Courses to Integrate Green Engineering Subjects' (2004) 20(1) *International Journal of Engineering Education* 113, Sharon Beder, 'Beyond Technicalities: Expanding Engineering Thinking' (1999) 125(1) *Journal of Professional Issues in Engineering Education and Practice* 12.

⁷⁹ Danielle Boykin, 'The Humanitarian Engineer', *Professional Engineer* (online), November 2008, <http://www.nspe.org/PEmagazine/pe_1108_Humanitarian.html>. For more information on 'humanitarian engineering' see J Schneider, J A Leydens and J Lucena, 'Where is Community? Engineering education and sustainable community development' (2008) 33(3) *European Journal of Engineering Education* 307, 312.

⁸⁰ David Weisbrot, 'Report of the National Pro Bono Task Force' (Australian Law Reform Commission, 2001) 9.

⁸¹ Committee Encouraging Corporate Philanthropy, 'Business's Social Contract: Capturing the Corporate Philanthropy Opportunity' (2009) 14.

programs.⁸² Lloyd et al note there is currently a deficiency of creative leadership in the engineering profession to support a shift in individual and corporate thinking.⁸³ The engineering industry requires community and corporate leaders to inspire others and legitimise the concept of pro bono engineering service.

C. Infrastructure

The development of a structured legal pro bono program was assisted through the rise of community legal centres and organisations such as PILCH and the Public Interest Advocacy Centre.⁸⁴ The referral centres provide infrastructure for the advancement of pro bono opportunities by collecting requests for services and matching the requests with lawyers and government supported advocacy organisations. The centres not only facilitate the provision of services, but also provide support and work continuously to improve and increase the provision of pro bono services.⁸⁵ The engineering industry currently lacks the infrastructure to support engineering volunteerism on a widespread individual and corporate level. Organisations such as EWB and RedR operate on a micro scale and aren't primarily focused on domestic 'community referral' in the way community legal centres are. There is also an absence of a government supported body to research, collect statistics, set pro bono targets and advocate for further pro bono activity in the engineering sector as provided by the National Pro Bono Resource Centre for the legal industry. Passino argues that appropriate infrastructure would provide the opportunity for engineers to provide their services through pathways that would allow them to learn how their skills can benefit the needs of the community.⁸⁶

⁸² Cynthia Fuchs Epstein, 'Issues Entrepreneurs: Charisma, Charisma-Producing Events, and the Shaping of Pro Bono Practice in Large Law Firms' in Granfield R. (ed), *Private Lawyers and the Public Interest: The Evolving Role of Pro Bono in the Legal Profession* (Oxford University Press, 2009) 211, 228.

⁸³ Lloyd et al, above n 73, 170.

⁸⁴ See PIAC, *About PIAC* <<http://www.piac.asn.au/>> .

⁸⁵ National Pro Bono Resource Centre, 'Mapping Pro Bono in Australia', above n 13, 119.

⁸⁶ Passino, 'Educating the Humanitarian Engineer', above n 75, 592.

D. Government Incentives

There currently exists a lack of government incentives supporting the involvement of engineers in pro bono activity. There are no considerations of pro bono activity in tender considerations and no requirement that 5-15 per cent of the value of government engineering work be spent on pro bono activity.⁸⁷ In mandating that pro bono activity is required for government work, or including the provision of pro bono activity in criteria for the selection of tenders, governments can provide incentives for corporate involvement. In providing incentives, governments will realise benefits for communities and will also legitimize the concept of pro bono service in the engineering sector.

E. Corporate Involvement

Engineering firms have not identified with the provision of pro bono services as demonstrated by law firms. As noted previously, there is not a widespread industry presence in the provision of pro bono engineering services. Engineering firms recognise the advantages of acting as a good corporate citizen, with many devoting website pages to their community activities,⁸⁸ however with very few firms even mentioning pro bono activity,⁸⁹ it would appear that they do not recognise the benefits of conducting pro bono activity as law firms do.⁹⁰ Engineering firms do not retain pro bono coordinators, do not have written pro bono policies and without infrastructure to support their involvement, may require

⁸⁷ For instance, the Employment and Workplace Relations Department of Education, Australian Government, 'Implementation Guidelines for the National Code of Practice for the Construction Industry' (July 2009) does not mention 'pro bono' or 'community' in its guidelines formulated to ensure the construction industry will meet government procurement standards. However it is noted that in the New South Wales Treasury Office of Financial Management, 'NSW Government Procurement Policy and Guidelines Paper' (July 2004) <http://www.treasury.nsw.gov.au/_data/assets/pdf_file/0004/3955/tpp04-1.pdf> the tendering company's community relations will be considered, 15.

⁸⁸ For examples of the types of community involvement promoted by engineering companies, see, GHD Australia, *Community Contributions* (2009) <<http://www.ghd.com/about-us/community-contributions/>>, WorleyParsons, *Community* (2008) <<http://worleyparsons.com/AboutUs/community/Pages/default.aspx>>, KBR, *Community Involvement* (2010) <<http://www.kbr.com/Social-Responsibility/Community/Community-Involvement/>>, Billfinger Berger Services, *Corporate Social Responsibility* <<http://www.bbs.com.au/pages/profile.aspx?PageID=19>>.

⁸⁹ For examples of the extent of pro bono promulgation on engineering company websites, see, Arup, *Communities and causes* (2010) <http://www.arup.com/About_us/Making_a_difference/Communities_and_causes.aspx>, Sinclair Knight Merz, *SKM and the Community* (2010) <<http://www.skmconsulting.com/About-Sinclair-Knight-Merz/SKM-and-the-Community/>>, AECOM, *Social Responsibility* (2010) <<http://aecom.com/About/Social+Responsibility>>, Aurecon, *Helping the community* (2010) <<http://www.conwag.com/news/news.asp?pgID=36>>.

⁹⁰ See, eg, Parker, above n 28, 5-8.

significant time and energy to establish relationships and avenues through which pro bono activity can be supported at the firm. There are currently no government incentives and an absence of supporting infrastructure for the involvement of corporate firms. With widespread corporate involvement, engineers and engineering students would be more aware of the role they could play in assisting communities and may be able to more easily identify with their professional responsibility to give back to society.

F. Publicity and Celebration

The few instances of current engineering pro bono work are not being celebrated as they are in the legal sector, which regularly recognises pro bono activity through industry awards.⁹¹ Without widespread corporate pro bono activity and the appropriate infrastructure to foster, strengthen and create competition over services, celebration of achievements may not be recognised or supported by the industry. In order to incentivise and provide recognition to the individual conducting pro bono work, the incorporation of community service, or a pro bono community project could be included in professional development 'points' or as an elective in the Chartered Engineers program.⁹² Similarly to the incorporation of a pro bono ethic into university education, requiring pro bono activity of engineers in order to be registered will reinforce that pro bono service is a recognised and expected responsibility of being a professional engineer. In the UK, ProHelp is campaigning to include pro bono work in continuing professional development activities.⁹³ Incorporating community service expectations in professional qualifications will encourage a greater connection between the

⁹¹ See, eg, The Victorian Bar, 'Pro Bono Award recipients announced' (Media Release, 18 May 2010) <<http://www.vicbar.com.au/GetFile.ashx?file=GeneralFiles/VictorianBarProBonoAwards2010.pdf>>, National Pro Bono Resource Centre, *National Pro Bono News: Issue 34 (Justice Awards Edition)* (November 2007) <<http://www.nationalprobono.org.au/page.asp?from=0&id=139>> where the legal industry recognizes pro bono activity through the provision of awards, whereas the engineering industry has no award systems, and few companies even recognise their own provision of pro bono service on their website. See Sinclair Knight Merz, *SKM and the Community* (2010) <<http://www.skmconsulting.com/About-Sinclair-Knight-Merz/SKM-and-the-Community/>> for an exception to the general rule.

⁹² For an explanation of the Chartered Engineers program, see Engineers Australia, *Chartered Status: The benefits of Chartered status* (2010) <http://engineersaustralia.org.au/professional-development/chartered-status/chartered-status_home.cfm> .

⁹³ Business in the Community, above n 64, 3.

work of engineers and the community, while working to address the ‘cultural and socioeconomic gap between engineers and their community.’⁹⁴

VI WHY IS PRO BONO BETTER THAN OTHER FORMS OF CORPORATE GIVING?

The adoption of corporate social responsibility principles by businesses around the world has increased the prevalence of corporate giving practices.⁹⁵ The recent development of these activities is demonstrated by a 2006 Volunteering Australia survey which found that the majority of corporate volunteering programs have been developed since 2003.⁹⁶ Corporate volunteering activities have included: pro bono activity, donations, employee volunteering, partnerships, cause related marketing, partnerships and in kind support.⁹⁷ Corporate giving programs can also have positive effects on employees, with research suggesting employee involvement can improve the culture of the firm, employee satisfaction and performance and attract talent.⁹⁸

Studying pro bono activity, Rhode found that ‘[e]veryone feels that they touched a life... No office picnics or parties can give you that’⁹⁹ Geraldine Googue noted that companies ‘know they have to do more to keep [employees] by doing things like pro bono work being offered by the organisation that they can get involved in. The organisation is almost like a broker for the employee to give meaning to their work life.’¹⁰⁰ Whilst there are external motivations for

⁹⁴ Passino, ‘Educating the Humanitarian Engineer’, above n 75, 585.

⁹⁵ See eg, Simon Zadek, *The Civil Corporation: the new economy of corporate citizenship* (2001), 1.

⁹⁶ Volunteering Australia, ‘Corporate Volunteering Survey’ (Volunteering Australia, 2006) <http://www.volunteeringaustralia.org/html/s02_article/article_view.asp?id=372> 5.

⁹⁷ Cooke, above n 14, 6.

⁹⁸ Terence Lim, ‘Measuring the Value of Corporate Philanthropy: Social impact, business benefits and investor returns’ (Committee Encouraging Corporate Philanthropy, 2010) 30.

⁹⁹ Deborah L Rhode, *Pro bono in principle and in practice: public service and the professions* (Stanford University Press, 2005) 30.

¹⁰⁰ Cooke, above n 14, 104.

undertaking pro bono activity, such as the positive marketing opportunities it provides; there are also internal motivations of attracting and retaining employees whilst providing professional development opportunities.¹⁰¹

Skilled volunteers are valued by not-for-profit and community organisations that benefit from the specialised knowledge and processes brought by the volunteer. For this reason, The Centre for Corporate Public Affairs report, 'Relationship matters: not-for-profit community organisations and corporate community investment' included in its recommendations that corporations develop skill-based employee volunteering.¹⁰² In some instances, the skills provided pro bono may benefit a community or organisation to a greater extent than the equivalent monetary donation.¹⁰³

The benefits of conducting pro bono activity for the individual and for the engineering company are many and varied. Passino argues that pro bono activity will educate engineers in cultural and socioeconomic issues, produce appropriate outcomes for communities, improve corporate community giving programs, develop the concept of professionalism in the industry, encourage engineers to enter public debate, improve the public reputation of engineers and increase the numbers of talented students and professionals who are socially aware and responsible.¹⁰⁴ Robert Care emphasises the personal gains in experience and leadership provided by pro bono activity that would otherwise take years to develop in addition to the beneficial workplace culture that is promoted through such opportunities.¹⁰⁵ Similarly to the legal sector, there exists a wide range of motivations for the engineering industry to undertake pro bono activity.

¹⁰¹ Cai Steger and Cari Parsons, 'Exploring Corporate Philanthropy' (Committee Encouraging Corporate Philanthropy, 2006) 15.

¹⁰² The Department of Families Centre for Corporate Public Affairs, Housing, Community Services and Indigenous Affairs, 'Relationship matters: not-for-profit community organisations and corporate community investment' (2008) Recommendation 4.

¹⁰³ Ibid.

¹⁰⁴ Passino, 'Educating the Humanitarian Engineer', above n 75, 579.

¹⁰⁵ Care, above n 66, 42.

Pro bono activity may also provide an economically efficient method of corporate giving. According to estimates of the Australian Bureau of Statistics (ABS), over the 2001-02 financial year, the legal services businesses generated \$10 636.1 million in income with an operating profit margin of 29.7 per cent for solicitors practices.¹⁰⁶ Over the same period, the ABS estimates that consultant engineering services earned \$9 342 million, with an operating profit margin of 12.5 per cent.¹⁰⁷ These figures demonstrate that the legal community has deeper pockets from which to give and this should encourage innovative corporate giving on the part of the engineering companies. Pro bono activity which utilises employee down-time and provides avenues for graduate training may be a far more economically effective means of corporate giving than handing out lump sums of money.

The possibility of improving the public perception of engineering is additionally a powerful motivator for attracting talent to the industry. Engineers Australia predicts a continuing skills shortage in the engineering profession, with an estimated 70 000 engineers retiring and only 45 000 students graduating in the years 2006-11, demonstrating the need for the engineering industry to attract greater numbers of high-school students to undertake engineering.¹⁰⁸ Kulacki argues that the public perception of engineers is currently neutral and that it is only when this becomes negative through negligence or ineffectiveness that engineers will be compelled to action.¹⁰⁹ Lloyd et al note the public's misconceptions as to the roles and work of engineers in Australia.¹¹⁰ Douglas et al argue that '[t]here is a pressing need for engineers to become more proactive with society – to engage, to communicate, and

¹⁰⁶ Australian Bureau of Statistics, *Legal Practices, Australia, 2001-02* (25 June 2003) <<http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/6873E6FC08AB80C1CA2575DE0019BF6D?opendocument>> .

¹⁰⁷ Australian Bureau of Statistics, *Consultant Engineering Services, Australia, 2001-02* (3 July 2003) <<http://www.abs.gov.au/Ausstats/abs@.nsf/e8ae5488b598839cca25682000131612/0e508767524d820cca2568a900139369!OpenDocument>> Note that these statistics are limited to consulting engineering services and do not include engineers working as engineers within mining companies or other businesses.

¹⁰⁸ Engineers Australia, 'National Curriculum Board: Submission in response to the National Mathematics and Science Curriculum Framing Papers' (2009) <<http://www.engineersaustralia.org.au/search/advocacy/current/folder/563>> 1.

¹⁰⁹ Kulacki, above n 6, 170.

¹¹⁰ Lloyd et al, above n 73, 147.

to lead.’¹¹¹ In carrying out pro bono services, lawyers are directly and indirectly addressing the arguably poor reputation of the legal community within society.¹¹² Pro bono activity will provide an avenue for engineers to communicate more widely with their community, improve the public’s understanding of the role and importance of the engineering profession and attract greater numbers to the field of engineering.

VII CONCLUSION

The professions of lawyers and engineers concern different subject material, yet they share many characteristics. The motivations, mechanisms and measures of legal pro bono activity highlighted a progression from a *developmental* stage to one that is more *institutionalised*. It is concluded that the engineering profession is currently in the *developmental* stage of pro bono activity, without any of the characteristics of the *institutionalised* legal pro bono sector. The engineering community needs to engage with the concept that they have a professional responsibility to give back to society. It is doubtful that pro bono engineering services will progress along the *developmental* to *institutionalised* spectrum without the intervention of external factors such as the development of supporting infrastructure, government incentives, or university education. Significant action must be taken by creative leaders, governments, university educators and corporate firms to develop a culture of pro bono activity in the engineering sector, Lloyd et al notes that ‘if large enough numbers of engineers band together in a professional association that will pursue related objectives with vigor and enlightenment, the world of engineering could be changed for the better, both for the community and for individual engineers.’¹¹³ The numerous benefits of conducting pro bono activity demonstrates that there exists a significant opportunity for the engineering

¹¹¹ David Douglas, Greg Papadopoulos and John Boutelle, *Citizen Engineer: A Handbook for Socially Responsible Engineering* (1st ed, 2009) xxiv.

¹¹² See eg, Kristen Hilton and Hugh De-Kretser, 'Working hard for the needy', *The Age* (online), June 24 2008, <<http://www.theage.com.au/opinion/working-hard-for-the-needy-20080623-2vjf.html>>, Jeremy Miller and Vallori Hard, 'Pro Bono: Historical Analysis and a Case Study' (1994) 21 *Western State University Law Review* 483, 492.

¹¹³ Lloyd et al, above n 73, 170.

industry to capture the lessons learnt from the legal industry to foster a culture of giving back to society and provide appropriate pathways for the institutionalisation of pro bono services in engineering.

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