NZIER
NEW ZEALAND INSTITUTE OF ECONOMIC RESEARCH

Economic contribution of consulting

Focused on professional services firms working in the built and natural environment

NZIER report to ACE New Zealand

November 2025

About NZIER

New Zealand Institute of Economic Research (NZIER) is an independent, not-for-profit economic consultancy that has been informing and encouraging debate on issues affecting Aotearoa New Zealand, for more than 65 years.

Our core values of independence and promoting better outcomes for all New Zealanders are the driving force behind why we exist and how we work today. We aim to help our clients and members make better business and policy decisions and provide valuable insights and leadership on important public issues affecting our future.

We are unique in that we reinvest our returns into public good research for the betterment of Aotearoa New Zealand.

Our expert team is based in Auckland and Wellington and operates across all sectors of the New Zealand economy. They combine their sector knowledge with the application of robust economic logic, models and data and understanding of the linkages between government and business to help our clients and tackle complex issues.

Authorship

This paper was prepared at NZIER by Bill Kaye-Blake.

It was quality approved by Todd Krieble.

The assistance of Sarah Spring and John Yeabsley is gratefully acknowledged.

How to cite this document:

NZIER. 2025. Economic contribution of consulting: focused on professional services firms working in the built and natural environment. A report for ACE New Zealand.

Registered office: Level 13, Public Trust Tower, 22–28 Willeston St Wellington
Auckland office: Level 4, 70 Shortland St, Auckland
Postal address: PO Box 3479, Wellington 6140
Tel 0800 220 090 or +64 4 472 1880 | econ@nzier.org.nz | www.nzier.org.nz

Key points

We estimated the economic value produced by certain consultants

The Association of Consulting and Engineering New Zealand (ACE New Zealand) is a non-profit membership organisation that represents consultants and professional services firms working in the built and natural environment. ACE New Zealand commissioned NZIER to estimate the economic contribution that its members make.

We developed a tailored approach

We developed two approaches to estimating this value, using data from interviews, a survey, remuneration research and information from the New Zealand Infrastructure Commission. One approach estimated the additional value that consultants create compared to the revenues they earn. The other approach considered the avoided costs that client organisations do not have to incur because they can engage external consultants.

ACE New Zealand members produce billions of dollars of value per year

The value approach estimated that New Zealand infrastructure obtains a $3.3 billion net benefit per year by using consultants. For every $1 spent on consultants, New Zealand is $2.1 better off.

The avoided costs approach estimated that clients save $1.9 billion per year by using ACE New Zealand member professional services firms.

Across all ACE New Zealand members and their work, we estimate that the approximately $5.4 billion paid to them produced $11.4 billion in value, for an excess benefit to New Zealand of $5.9 billion.

We conducted sensitivity testing of both estimates. While different inputs change the dollar values, they do not change the overall finding that consultants create significant value for New Zealand.

Consultants produce value in different ways

Clients and consultants alike agreed that the system in New Zealand, combining in-house staff and external experts, is useful and valuable.

- Consultants provide specialised skills and knowledge gained from focused work on specific types of projects.
- They recognise patterns from prior work that can save time on current projects. They also bring understanding of the 'reference class' (Flyvbjerg and Gardner 2023) to which a project belongs.
- Consultants provide short-term capacity for all kinds of projects, so that clients do not have to manage staff around variations in workload.
- Consultants provide an external perspective, and professional services firms have the reputation and mana to be a robust, independent voice. Clients sometimes need that

independent perspective for some designs, plans or actions. In particular, consultants can reduce optimism bias.

- Consultants reduce the risk in the whole system by applying their specialised knowledge. They reduce the odds that a project will fail. They also re-allocate risk from client organisations and manage it.

This system is flexible and dynamic

Consultants respond to conditions in the market. Client organisations make changes over time in the amount of work done in-house or externally. Individuals move from one organisation to another, sometimes transitioning between professional services firms and clients. All of these ongoing changes mean that the boundary between the client side and the consulting side is fuzzy and dynamic. This suggests a system that is not fixed and stuck in the past, but one that is constantly testing and trialling ways to create value for money.

Contents

Appendices

Figures

Tables

1 Project motivation and scope

1.1 Motivation for the project

The Association of Consulting and Engineering New Zealand (ACE New Zealand) is a non-profit membership organisation that represents consultants and professional services firms working in the built and natural environment. Its members work in such areas as infrastructure, transport, land development, planning, environmental assessment, and more. ACE New Zealand commissioned NZIER to estimate the economic contribution that its members make. This report presents relevant economic theory, discusses several data sources, and provides calculations of economic value.

The question of the value of these consulting services is an important one for the New Zealand economy. A significant share of planning work is done by consultants working in private companies. *'The interdisciplinary professional consultancy firm is of increasing importance in the practices of shaping the built environment*' (McLeod and Schapper 2024). Organising engineering expertise into consulting firms provides a mechanism for pooling knowledge and experience (Thomas 2011), which are important reasons that this activity is organised by firms in a modern economy (Walker 2019). Despite the contributions that these firms make to the public and private sectors, engineers find it difficult to explain the commercial or economic value of their work (Trevelyan 2012; Trevelyan and Williams 2015). The estimates in this report should provide a basis for articulating that value.

1.2 Methods for estimating the value of consulting

The methods we used to estimate economic value were designed from the ground up based on economic ideas of productivity and the theory of the firm. They are also based on our experience with cost-benefit analysis, a tool or technique that NZIER commonly uses on a range of economic questions. We explored the literature on consulting, including some research on management consulting, but mostly focused on engineering consultants, to determine how the problem had been addressed in the past. We found prior research that estimated the economic value of engineering based on cost and income (PwC 2021; 2020),[1] but nothing that attempted to estimate the extra value that knowledgeable specialists produced for their clients. For that reason, we developed methods from first principles.

We decided to calculate the value of consulting in two ways, which provides a range of results and adds robustness to our findings. The methods are explained below in the report. Data for the calculations had several sources. Some data came from prior research, particularly by the New Zealand Infrastructure Commission. In addition, we conducted interviews and a survey as part of this project. Finally, ACE New Zealand also commissioned a remuneration report from Strategic Pay, which provided key data for the analysis.

1.3 Limitations of our analysis

We note at the outset that there are limitations to our estimates. We have designed a new approach, and like all novel work, it may be critiqued and refined. Certainly, there are no prior estimates to which to compare this analysis as a first level of review. We have also

[1] The main author of the current report also led those prior research projects in New Zealand.

relied on a limited sample of respondents for both the interviews and the survey. The number of respondents is too small for the results to be statistically significant. However, we made a trade-off between achieving statistical significance and being sensitive to respondent fatigue, confidentiality, and knowledge of the topic. We believe, given the circumstances, we have taken the correct approach. We also note that our sensitivity analysis did not call into question the key findings of the work. We acknowledge that future research may produce different data and lead to different estimates. Nevertheless, the key lesson from the findings – that professional services firms in the built and natural environment contribute economic value in excess of the payments they receive – seems robust.

1.4 Structure of this report

The rest of the report is divided into sections. The next section reviews research relevant to the topic, including the economic theory underpinning our work and prior research on the value of consulting. Section 3 then discusses the perspectives of New Zealand consultants and their clients, who describe a system in which they operate collaboratively to improve the built and natural environment of the country. The system is not without tensions – as noted in their responses – but it does involve high degrees of trust and co-operation. Sections 4 and 5 present two ways of calculating the value of consulting. One is the value method, which estimates the extra economic value to infrastructure of the specialist skills in these types of professional services firms. The second is the cost method, which estimates the additional costs that the client avoids by using ACE New Zealand consultants rather than employing the equivalent staff in-house. The report finishes with a discussion of the results.

2 Research relevant to consulting

2.1 Economic lens on consulting

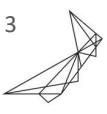
The lens we put over this question is the theory of the firm. This is an area of economics that works to explain why activity is organised the way it is, into different types of organisations that do specific things. Conceptually, the key question is why firms exist at all (Walker 2019; Coase 1993). On the one hand, all economic activity could happen as market transactions. If you want me to write a report, staff your reception area, or sell your clothes to customers, we could write a contract in which I provide those services, and you pay me for delivery. Alternatively, all economic activity could be managed inside large organisations, so that there are no market transactions or contracts. A company can provide its employees with housing, food, clothing and entertainment, directing employees in its different branches to provide their colleagues with goods and services. In fact, there are historical and contemporary examples of other arrangements that demonstrate a variety of solutions are possible.

For the value of consulting, a key question is why clients use consultants. The simple answer is that clients derive value from using consultants. But why and how do they derive that value?

The theory of the firm has developed over the past hundred years or so, and we oriented our research on consulting around several ideas from the literature (Walker 2019):

- **Transactions costs** – any transaction entails some cost for negotiating and making the transaction. Even a simple purchase at the grocery store requires the customer to present the goods, be charged for them and provide payment. It also requires the customer to go to the store or complete the online order. As a result, customers do not purchase each item separately; instead, they aggregate their shopping to buy multiple items at once. There is also the matter of ensuring that the buyer and seller agree on what is to be delivered, and then that the delivery sufficiently matches the promise.
- **Incomplete contracts** – it can be difficult to specify exactly what you want and how it is going to be produced and delivered, and then things change, and life gets in the way, and what happens then? Any contract is incomplete. It will cover most things most of the time, but there will always be something that could happen that isn't specified – such as a global pandemic that shuts down international travel.
- **Property rights** – production requires a combination of individuals' work, financial investment, collaboration and technology; these are factors of production. When that production creates value, that value is shared among those factors, often in the form of money. Asserting ownership of something – some intellectual property (IP), a bit of expensive kit, some specialised knowledge – involves claiming payment for its use. Economic research on property rights has explored how the desire to claim those payments leads to specific legal arrangements, such as the firm. That is, there is extra money to be made if you own the machine or own the IP. At the same time, consultants may be better positioned than clients to capitalise on the opportunity.
- **Principal-agent issues** – the consulting-client relationship has potential principal-agent issues. The principal-agent problem considers the incentives between two people: the principal, who wants something done, and the agent, who is doing the work. Simplistically, the agent wants to produce a minimally acceptable product while receiving the highest pay, while the principal wants the best possible product for the lowest cost. The principal-agent problem is about aligning incentives so that both sides are satisfied.

Firms have developed ways to solve these problems. A firm doesn't have to recruit new workers every day and negotiate their terms; it has employees that it can reasonably expect to show up to work. Inside a firm, the exact work product doesn't have to be fully specified beforehand; people can share ideas, interim work products and drafts as they iterate toward a final product. If something changes – someone is no longer available, a key part isn't available – the team can discuss how to adapt and then follow through. The firm is the owner of key resources, such as specialised equipment or IP, and it ensures that some of the revenue goes toward funding those resources. The firm solves an internal principal-agent problem: managers can instruct employees on what to do and monitor their performance. It also partly solves an external principal-agent problem with clients. The consulting business survives by creating and maintaining a reputation for good delivery, or it can be punished for not delivering to the satisfaction of clients.



2.2 Why do consulting firms exist?

Both consultants and clients may be organised as firms or other legal entities. The question isn't so much, 'why do consulting firms exist?', but 'why is the line between client and consultant drawn right where it is?' Why is this set of work kept in-house, while this other set of relatively similar work outsourced? This is known as the 'make-or-buy decision': do we make it ourselves or buy it in (Tadelis 2002; Klein and Mazzoni 2008; Klein 2005)? The decision is driven by factors such as the complexity of the product, the completeness of the product design, the cost of production, ownership of assets and more. One framework assessed transactions and assets along two dimensions: frequency and investment characteristics (Williamson 1987). The framework then sets out the different governance relationships – different boundaries – according to these qualities.

The core question for research on firms is, how do they add value to the economy? Similarly, the economic question for consultants is, how do they add value to the economy, and how much extra value do they create? Clients continue to use consultants, which is a clear indication that they are useful and add value. The purpose of this project has been to dig into that idea. If we start from the theory of the firm, consultants create value in these ways:

- **Transaction costs** involve a continuum from transactions being entirely market-based to a fully command-and-control economy. Consulting offers a middle ground that has some benefits of both. It tends toward the market end, which allows clients like government agencies to create a competitive process that finds the lowest price for a given project. However, the consulting-client boundary is flexible, which allows the client to experiment and find the right balance between in-house employees who are fully managed, partly managed arrangements such as secondments and panels or preferred suppliers, and fully market-based transactions with proposals and selection committees. The value is in finding the right relationship that delivers value for money.
- **Incomplete contracts** are a problem in the built environment and infrastructure. It is impossible to specify exactly what must happen for each eventuality and who must pay. Consulting arrangements allow clients to offload some of the risk onto consultants. Consultants take on that risk because they have special knowledge and skills built up over many years and projects. To the extent that they understand the 'reference class' of a project (Flyvbjerg and Gardner 2023) – projects of a similar type with similar issues – they can manage risks better. Managing risks is a service to clients and so consultants are paid for it. In addition, the nature of consulting in New Zealand, based on long-term relationships, tends to lead both clients and consultants to seek mutually acceptable solutions to problems rather than burning the other party. This approach may not always be the case, as seen in various legal proceedings involving construction and infrastructure projects.
- **Property rights** are an underlying driver of consulting. One way that firms compete is by using their distinctive processes that are shaped by their specific knowledge and experience (Teece et al. 1997). Engineering, design, land development and similar activities involve a combination of existing knowledge and problem-solving. Each project involves the use of existing knowledge and tools, which must be maintained. In addition, each project provides an

opportunity to learn and develop an information base. They may also be opportunities to develop tools or products, for example, software to create better designs more efficiently. Some property – intellectual or otherwise – is used and more property, in the sense of something that perseveres beyond the project, is created. What a consulting firm arrangement does is vest that property with someone who has the incentive to look after it. Because a consulting firm can profit from useful knowledge, and profits more from maintaining and improving it, that firm has the economic incentive to maintain that specialised property up to the point that its economic usefulness is exhausted. Because clients are not specialised in the same area, they may not have the ability to recognise the potential value or build the capacity to maintain it.

- **Principal-agent issues** are at the core of consulting. The client – the principal – has something that needs doing. The consultant – the agent – is hired to do it. One issue is transmitting the expectation, so that the consultant knows exactly what the client wants. Another issue is ensuring that what the consultant delivers meets the expectations of the client, at least to a minimum standard. A third issue is that the client might lack information or might not know exactly what they want. Finally, conditions may change so that the original expectation is no longer appropriate or feasible. There are at least three mechanisms that address the principal-agent problem. One is contracts: writing good contracts that specify what is required and how to handle changing conditions is core to the client-consultant relationship. Having standardised contracts, for example, is one example of a sector-wide response to the principal-agent problem. Standardised contracts reduce one source of variation and uncertainty. A second mechanism is good relationships. Maintaining supportive, collegial relationships – as opposed to transactional or adversarial relationships – helps clients and consultants solve problems. There are always issues that arise with contracts; maintaining good relationships is one way to deal with those issues (Snow et al. 2021; McIntyre et al. 2019). A third mechanism is incentives, such as payments for meeting certain timeframes or options to extend contracts. These incentives provide a reason for consultants to deliver well to clients. Taken together, these mechanisms create a situation in which both principal and agent have a stake in resolving issues and delivering well.

2.3 Research on the value of consulting

While the value produced by consulting services and client satisfaction are important to business, researchers report that there has been little academic attention to the drivers of value from consulting (Grufman and Larker 2020). Even so, much of the existing research focuses on management consulting (Mosonyi et al. 2020; Stahl 2018; Veres and Varga-Toldi 2021; Grufman and Larker 2020) as opposed to engineering and design consulting (Samson and Parker 1994; Sones et al. 2022; Stroe 2013; Thomas Ng and Chow 2004). One study of management consulting firms found that they took an unstructured and highly subjective approach to retrospective assessment of the value they produced for clients (Grufman and Larker 2020). Other research has confirmed that this subjective approach is common for evaluating consulting engagements (Motamedi 2015).

One approach to thinking about the value of consulting is its contribution to gross domestic product (GDP). This is the approach taken by the ACEC Research Institute, which came out

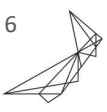
of the American Council of Engineering Companies. This approach examines the revenues earned and salaries paid, and uses macroeconomic data to estimate the GDP contribution. They found that in the Engineering and Design Services industry, wages in 2021 were US$100,200 on average, the direct contribution to GDP was US$213 billion, and employment was 1.53 million (ACEC Research Institute 2022). Another piece of research also investigated the impact of engineers in New Zealand in a somewhat similar way. That research also focused on the salaries of engineers as a measure of their economic contribution, although it investigated both industry-level and occupational data to identify engineers throughout the economy (Engineering New Zealand 2023; PwC 2021; 2020). These studies used a standard approach to estimating economic impact, but did not account for any additional value created by those services. Everything was valued at cost.

That kind of economic calculation does not fully capture the value of engineering services. Success in consulting projects is more than the cost of consultants. Many other measures of success have been proposed and measured, including improved client performance, client learning, improved systems and processes, and improved costs (Gable 1996). Many of these are apparent only after an engagement has concluded.

Researchers showed that assessments of the quality of engineering consultancy services are multidimensional. Both technical and management types of indicators of client satisfaction were important, and multiple indicators within each set were also important (Aluko et al. 2020). Technical indicators included workable and error-free designs, while management indicators included communication and project management. Other research has highlighted that clients value more than just time, cost and quality; they also think about trust, commitment, health and safety, creativity, value for money and more (Aliakbarlou et al. 2018).

The critical success factors in the client-consultant relationship have been studied. One study surveyed employees at a client firm about their views on management consultants (Appelbaum and Steed 2005). It found that clients rated consultants higher when consultants took a collaborative, partnering approach, and when they understood the client's sense of urgency and also state of readiness for the proposed solution. These findings suggest that successful consultants need to be sensitive to client needs and flexible in their delivery (Appelbaum and Steed 2005; Hasam and Hasam 2023). However, research has shown that developing warm relationships and earning clients' trust also affect clients' perceptions of value (Hasam and Hasam 2023).

One study explored the gap in perceptions of service quality between clients and consultants from professional engineering firms (Samson and Parker 1994). Clients, including both architects and local government. Both sets of clients highlighted failure to meet deadlines and inadequate communication as sources of dissatisfaction. Architects, however, focused more on the lack of personalised service and innovation, while government clients pointed to inaccurate documentation and unrealistic cost estimates. The researchers offered different interpretations for the results. One interpretation was unrealistic client expectations, while a second was that the consulting firms were not listening sufficiently to their clients. Regardless of the interpretation, the study pointed to a gap between how consultants perceived their work and how clients perceived it. Finally, this study raised an important principal-agent issue: principals in the engineering firms tended to win the work and manage client relationships, while junior engineers tended to produce the work. The difficulty isn't just that clients need to work with consultants, but also that consulting firms need to manage communication and delivery internally.



It's also important that research suggests that perceptions of quality are changing. One literature review (Landy et al. 2020) extracted a set of traditional service quality dimensions in the construction sector from the literature. They were reliability, responsiveness, assurance, empathy and tangibles (that is, 'Technological tools'). The research then added several new service quality success factors: quality aesthetic, design, care in execution of work and innovation.

Research on the value of consulting has yielded very few quantitative estimates of that value. Instead, the focus has been more on the drivers of perception of value, and differences or gaps in perceptions between consultants and clients. In addition, the research has noted that evaluations tended to be *ad hoc* and subjective. For this reason, several researchers have developed or proposed frameworks for evaluation. The research appears to confirm the observation that engineers struggle to articulate the value they produce for the economy and society (Trevelyan 2012; Trevelyan and Williams 2015).

3 Views from consultants and clients

3.1 We interviewed and surveyed people from consulting and client organisations

For this project, we conducted interviews with nine people from a combination of consulting firms and their clients. The consulting firms provided a range of services, including surveying, land development, structural engineering, civil engineering, geotechnical engineering, transport engineering and digital services. They were mid-sized and large firms. They work in New Zealand as well as overseas, including Australia, the United States, and other countries.

The clients came from local, regional and central government, including both small and large organisations. They used professional services firms for a range of work: planning, urban planning, forecasting, transportation, optioneering and strategy development. They also mentioned needing consultants for specialised infrastructure requirements, things that they rarely did, so they brought in consultants who had experience. One reported that their analysis a few years ago found that they used hundreds of consultants per year. Another reported that 50 percent of the team was external consultants as opposed to core staff.

Additionally, for this project, we conducted a brief survey via email among individuals from consulting firms and their clients. After gathering the available information, we identified a few gaps in the data that, if filled, would enable us to calculate the economic value of professional services firms. We were sensitive to the issue of respondent fatigue and over-surveying, so we designed a short survey that could be emailed to a purposive sample. We wanted the sample to include representatives from small, medium and large consulting and client organisations. We were successful with our respondent sample.

The two methods were a semi-structured interview approach and an emailed survey. The instruments we used are provided in Appendix A.

3.2 Roles of consultants and clients

The people we interviewed provided multiple perspectives on the roles of consultants and clients. They described a system in which consultants and clients worked symbiotically to

deliver a built environment to users and the New Zealand population. In particular, they worked together to deliver good outcomes cost-effectively, a goal summarised by the idea of producing value for money.

In this system, consultants and clients play different roles. Client organisations focus on 'meat and potatoes' or 'business as usual' work that they do regularly, while consultants tend to do work that provides specialised skills. This view divides work between generic activities and specialised activities. Consultant organisations in this system are diverse. They may be small or large, with large consulting firms in New Zealand having over a thousand employees. They may be specialised, in that they focus on specific activities, or they may be an umbrella for many different specialisations. They will have a variety of clients across the public and private sectors. They will also manage a variety of projects, from small projects that require a few hours to large ones requiring large teams and months or years of calendar time.

The division between consultants and clients was fuzzy rather than sharp. The boundary itself moved, as clients over time made decisions either to bring work into their organisations (to bring it in-house) or to rely more on consultants. The boundary was further blurred by the fact that people move between client and consultant organisations. Interviewees were asked specifically about how much movement occurred, and answers varied quite a bit. Some stated that there was little to no movement. Others said that there was a reasonable amount of movement between organisations or that it came in waves. The final blurring of the boundary had to do with the type of work done by consultants. One interviewee provided a typology of work that we recognise from our own work as economic consultants. This typology divides engagements into three types:

- Capability – in capability engagements, the consultant brings skills to the engagement that the client does not have. What the consultant adds to the engagement is specialised expertise or experience.
- Capacity – in capacity engagements, the client and consultant have similar skills, but the consultant is adding to the capacity of the client to deliver work. The consultant is another pair of hands or another body for the project.
- Cover – in cover engagements, the consultant is providing a seal of approval that is underpinned by its mana, brand or reputation. The consultant is providing cover for the client to take some action. The consultant, by virtue of their reputation, authorises the action in the minds of the client's stakeholders, such as the general public. Cover may be sought because the issue is controversial or to manage risk.

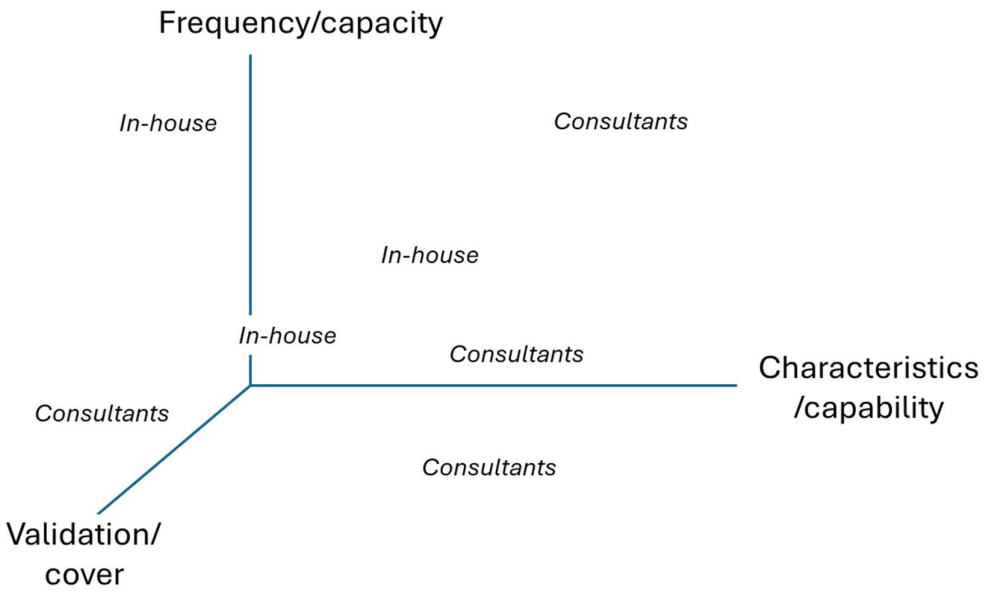
This typology provides a simple explanation for the benefits that professional services firms offer. These firms maintain specialised capabilities that clients do not have. One way to theorise this typology is with the idea of property rights. The idea is that specialised firms are a way to focus attention on resources and capabilities. They ensure that the contribution of those resources can be captured and reinvested in maintaining and developing them. With the specialised firm, the additional contribution might not be rewarded, or any additional earnings might be redirected to other uses. These professional services firms also maintain the surplus capacity that clients need from time to time. Clients could respond to fluctuations in their workload by hiring and firing staff. However, using a consulting firm reduces the transaction costs for clients. They can negotiate a single contract with a known consulting firm, saving time and reducing risk.

The cover-type engagements provoked us to develop our theoretical tools a little.[2] One way to think about them is as an interesting example of the principal-agent problem. In this example, the principal wants to do something but faces resistance. By allowing or encouraging the agent to take or propose the action, the principal is somewhat shielded from negative consequences. In this case, it is the independence of the agent, rather than their biddability (readiness to follow instructions), that creates the benefit from having consulting firms. If we take this idea further, we find that clients mentioned other similar reasons for employing consultants. Sometimes, the consultant is doing work that the client cannot do. Other times, the client is more or less certain that they have the right design or the right solution, but wants a review that can validate, remediate or improve the work. Still, there are other times, as mentioned above, where the consultant is providing cover for a foregone conclusion.

These descriptions suggest that the Williamson framework (Williamson 1987) could be expanded. Its two dimensions are frequency and investment characteristics. They appear to correspond to two types of engagements. The frequency dimension raises the question of capacity, and the investment characteristics are relevant to the specialised capabilities of consultants. The third type of engagement suggests an additional dimension, perhaps called 'validation', which describes the extent to which a principal is comfortable acting alone versus wanting additional, external support for decisions. This extended framework is shown graphically in Figure 1.

Figure 1 Typology of engagements

Showing three dimensions of engagement and tendency to use in-house staff or consultants



Source: NZIER

Finally, some respondents described a situation that changed over time. For one, the retirement of long-term council specialists was creating holes in their capability that were

[2] The contributions of John Yeabsley (NZIER) to this discussion should be acknowledged.

being filled by consultants. Another discussed an intentional process, in which work had been deliberately outsourced for a few years, but a recent decision meant that more work was coming in-house. A third noted an important problem with capability that affected how much they used consultants: they might have enough specialised work for one person, but if that person left for whatever reason, the organisation had no redundant capability and had to bring in outside help. These examples illustrate various reasons why the boundary between clients and consultants is flexible over time.

3.3 The reasons that clients hire consultants

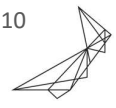
3.3.1 Expertise and skills

We asked consultants why they thought that clients hired them. The essential reason was the expertise of the consultants: they understand projects of the same reference class (Flyvbjerg and Gardner 2023) and bring to bear their expertise and skills. However, there are nuances to that idea. First, it can be simply about technical expertise. Consultants who focus on particular kinds of work have specialised knowledge and experience. Clients often lack specialisation, so they hire consultants. Second, one interviewee pointed out that engineers by nature are unlikely to 'beat their chests' and engage in self-promotion. That reticence makes it difficult to identify better, more experienced people. Finally, consultants have experience working with specific clients and understand how to work best with them. Several people talked about consultant-client relationships that have lasted for 20 or 30 years or longer. These reasons that consultants are hired – specialised, verified knowledge and existing relationships – are solutions to an information problem. The information problem is that the client needs a solution, but they are not an expert in that area. They lack technical expertise, and they also know that there is a possibility that a project can go poorly. Relying on specialists and existing long-term relationships are ways to solve the information problem. They reduce uncertainty and reduce the likelihood of a bad outcome.

Client organisations provided a similar view on skills. They said that their own staff tended to be either more generalist or less trained. Work was outsourced to consultants when it involved high-capability or high-skill work. They also suggested that councils in particular acted as training grounds. Once individuals got enough training and experience, they could earn more in consulting firms, so they left.

3.3.2 Personal and professional relationships

Personal and professional relationships play a role in the industry. Consultants indicated that the role of relationships was 'huge' and 'critical'. They explained that they had long-term clients who hired them repeatedly, trusting the understanding of the client's needs built up over time. They said that clients value the capability and value for money that they received. These relationships were also held by people, not organisations, on both sides. When individuals moved from one client organisation to another, they took with them their relationships with and trust in specific consultants. Another interviewee mentioned talking with Chief Executives of client organisations, who said that they wanted relationships with consultants. Their advice was that if you just turn up with a glossy brochure, you'll look like everyone else. From all of that, professional relationships built on a good reputation are central to the way the system functions.



Clients echoed these comments. They said that decisions about hiring consultants for a job were made on reliability, credibility and value for money. As a result, there was a strong reliance on relationships. They wanted to trust that the consultant would deliver and would provide good value. Alongside that, public organisations also made sure that tender processes were robust and transparent. Personal relationships didn't replace these processes but augmented them. For that reason, clients also preferred to have relationships with individuals rather than firms; it wasn't about the brand name of the companies but about the personal reputation of the individual consultants.

3.3.3 Evaluation of engagements

We were interested in whether the value of consulting arrangements is formally evaluated. Our thinking was that consulting professionals have an idea of the value they bring to an engagement, and they are also involved in repeatedly convincing clients to hire them. Generally, there was only a little formal evaluation or investigation. One interviewee noted that they won repeat work, which was evidence that the clients were satisfied. Other consultants have had conversations with clients, including project debriefs. Only one had participated in structured feedback surveys. Clients also provided mixed responses. Some did not have formal evaluation and review processes, and noted that value for money was both an ongoing concern and something achieved instinctively. Others did have formal metrics and reviews, which created information that was fed back into the system.

3.3.4 Specialised knowledge and resources

The focus of our interviews was mainly on the staff in professional services firms. They are the people who provide services to clients, and they have the knowledge and experience. In keeping with the idea of firms as a way to capture and maintain specialised knowledge, we asked whether firms had specialised business processes. Interviewees provided a range of answers. One said that they didn't; the knowledge was in people's heads, and it was difficult to retrieve information on prior projects from their systems. Another also said that they didn't, but that they had recognised this as a succession issue in the firm. The knowledge and relationships were held by individuals, not the company itself, and they were working on ways to change that. A third respondent pointed to ISO requirements and audits, noting that these processes contributed to professionalism and reputation in the firm.

Systematic knowledge was also a concern for clients. They noted that councils, in particular, typically have some long-term staff. These people are silos of knowledge about council work and its history. This knowledge can be difficult to systematise. In the language of types of knowledge, staff can have a large amount of tacit knowledge that is difficult to turn into explicit knowledge. In the case of long-term council staff, it is probably more cost-effective to retain staff to retain knowledge than to go through the effort of writing it down imperfectly. One manager explained that he wanted to ensure that he had enough work to keep a core staff fully employed, so that variation and fluctuation would affect only the externals or consultants. However, this approach also meant that the loss of a staff member could mean a large loss of knowledge and capability, which would be filled by specialist staff.

3.3.5 Risk

Risk is a key driver of the use of consultants and the ways that clients and consultants work together. The system is dealing with risks, such as physical failure, scope creep, budget blow-out and time delay. The combination of client and consultant has several impacts on risk. One impact is to reduce the overall risk in the system or in specific projects. Consultants use their specialised skills and knowledge developed from other similar projects to improve design and delivery and reduce risks like those mentioned. Another impact is to put the risk in the right place for it to be mitigated and managed. The third aspect mentioned in the interviews was risk-shifting. There were two parts to risk-shifting. One, it did not represent a reduction in overall risk in the system, which can occur when knowledge and experience are applied to improving a project. Two, it moved risk from clients to consultants, without that necessarily being the right place or best place for the risk to sit. Risk-shifting was seen by consultants as perhaps unfair, but also as counter-productive. Consulting organisations are aware of the increased risk to which they are exposed. Their reactions are to over-design solutions to lower risk or increase fees and/or insurance coverage to price in the increased risk. These adjustments by consultants result in higher costs for clients, who thus end up bearing the cost of the risk they tried to shift.

Client organisations discussed different aspects of managing risks. Sometimes, they used consultants to reduce risk by having them review or approve designs. Another set of eyes and specialist knowledge both served to reduce risk. Sometimes, though, clients were faced with unpopular or unpalatable options. In those cases, having the brand name of the consulting firm added mana and provided cover for those decisions. Clients used consultants to manage reputational risk. An interesting detail in this case is that the value comes from the brand of a large, reputable firm. This is different from other consulting engagements, where the focus was on personal relationships with trusted individuals. These kinds of assignments add variation to the work that professional services firms do and create niches in which different firms can be successful.

For both the boundary between client and consultant organisations and the management of risk, the system is in a state of tension and continually adjusting. For example, the boundary between organisations is fuzzy in three distinct ways. One, the work itself is sometimes done in-house by clients and sometimes outsourced. Two, the people doing the work move between organisations, so sometimes they work for client organisations and sometimes as consultants. Three, consultants are sometimes brought into the client organisation for capacity-type engagements, where they might be body-shopped (serve as temporary staff) or seconded into the client organisation. They are, in those cases, acting as a member of the client staff, and under the management and responsibility of the client organisation. These are dynamic, flexible and changing arrangements. The need for extra capacity ends; the temporary placement or secondment ends. A new manager, chief executive, or elected board member arrives, and the amount of work done in-house is increased or reduced.

Risk is also in tension and changing. First, the amount of risk in the system can be increased or decreased by the actions of consultants and clients. Second, the allocation of risk can change. Finally, the people in the system react to changes in allocation and make further changes, which creates a new round of reactions and changes.

3.3.6 Training

Another aspect of the system is the training of professionals. As we have pointed out, consulting firms are a way to maintain a specialised resource, and the most important resource is consultants themselves. We were curious to know whether firms invested in their people, as the theory would suggest. Consultants were involved in many types of training across the consulting firms interviewed. Sometimes, consultants are involved in formal training. From the interviews, this seemed to be more common with junior staff than senior staff. Professionals also need continuing professional development (CPD) hours, which drives a certain amount of formal training. Some firms maintained resources, such as libraries, that staff could access. They were also involved in peer learning, such as 'Lunch and Learn' sessions, where staff can hear from others about projects or topics. Some training was mandatory, while some was optional; some training was standardised, and some was individualised. Firms also allocate both time and resources for training. They might have a set budget or a set number of hours that staff could use on training. Taking into account both time and money, support for training seemed to use between five percent and ten percent of firms' budgets. This result fits with the idea of consulting firms as a mechanism for investing in specialised resources for use across the system.

On the other hand, client organisations, particularly councils, pointed out that they served as training grounds for their staff. Some council staff moved on to consulting firms after receiving formal training and gaining experience. Other council staff stayed and became the long-term staff members with considerable tacit knowledge of council work.

3.3.7 A symbiotic system with fuzzy boundaries

The overall picture from consultants and clients is of a system in which different people play their parts. Consulting firms are a way of growing and looking after specialists, who could not be as specialised in client organisations. In that, they correspond to the 'private property' explanation of firms in economic theory. They are a mechanism for ensuring that the specialised resource is compensated and maintained. We have also pointed to other explanations for the role of consulting firms. They help share risk between consultants and clients, which is a way of handling the problem of incomplete contracts. Consultants also lower overall risk in the system, because their specialised knowledge, gained from focusing on a specific area of expertise across multiple clients, allows them to create better solutions to client problems. Consulting firms reduce transaction costs compared to both individual consultants and employees. They provide a certain amount of 'bulk buying' of expertise but also lower costs for getting into and out of contracts – 'entry' and 'exit' from work.

This system is also somewhat flexible. The boundary between consultants and clients is fuzzy and shifts over time. This shifting can happen at the organisational level. One interviewee provided an excellent description of changes over time: a client organisation might decide it wants to have more control over the work, so it brings it in-house, or it might decide to be lean and keep only a core staff. Those decisions affect the level of consulting work they need. Those decisions can also change over time. Interviewees were also asked how much individuals moved between consulting and client organisations. There was no consensus: some said there was little movement, while others said that people commonly moved between organisations. One pointed to the beneficial effect of moving organisations: it gives a person a chance to understand the perspective from the other side.

3.4 The value that consultants create

The interviews described a flexible, symbiotic relation between clients and consultants and identified ways that consultants create value:

- Better design – the most important benefit of using specialised consultants from professional services firms is that they produce better solutions to problems than clients can produce themselves. Consultants are specialists, so they have more knowledge and experience about the specific areas or problems on which they are advising. They use that knowledge and experience to produce better results.
- Lower risk – the other benefit of specialised knowledge and experience is lower risk. Because consultants have greater depth of knowledge, they have more examples of what has worked and what hasn't. Secondarily, consulting firms can take on some risk from clients because they can confidently manage it from their positions as specialists. They can also provide cover for client organisations that are facing difficult decisions, effectively taking on some of the risk. In sum, they reduce the total risk in the system, and they reduce the risks that their clients face.
- Flexibility – interviewees emphasised the flexibility in the system and for clients. The system has a fuzzy boundary between clients and consultants, allowing client organisations to grow, shrink or change focus and still have access to trained and experienced professionals. Also, clients can focus on their core work – their 'bread and butter' – and bring in specialists when required.
- Value for money – these benefits – better design, lower risk and flexibility – all make design and output better. By specialising, professional services firms can focus on their areas of expertise and deliver work to many different clients over time. Consultants are thereby producing additional value for clients, who do not have to bear the cost of maintaining full-time specialist capabilities. As a result, this arrangement provides value for money.

Now that we have described how professional services firms create value for their clients, we can move to estimating that value.

4 Calculating the value of consulting: value method

4.1 Introduction to the value method

Consultants possess knowledge, experience, and expertise in specialised areas. They use those resources to solve problems for clients. Consultants add value by:

- Solving client problems more quickly
- Finding better solutions to client problems
- Reducing risk by offering better solutions or assuring clients that proposed solutions are correct.

The aim is to estimate the value of better, faster solutions with less risk. Importantly, this is not a question of cost to the client but of value produced by consultants. Research has shown that the value produced by construction firms, for example, is not uniform: one

estimate is that innovative firms could increase productivity by 50 to 60 percent (McKinsey Global Institute 2017).

The calculation described here is a way of estimating that type of improvement produced by consultants. It compares the difference between a factual and a counterfactual scenario, which is a standard approach in cost-benefit analysis. The factual scenarios correspond to the current situation in New Zealand as analysed by the New Zealand Infrastructure Commission (NZIC). The counterfactual corresponds to a thought-experiment: what would happen without these professional services firms? The difference between the two scenarios is an estimate of the economic value contributed by these consultants.

4.2 Sources of data

The calculations reported in this section rely on several sources of data. First, we reviewed information from the NZIC related to the spending on infrastructure and the overall value created. Second, we conducted a survey to obtain some specific bits of data needed for the calculation. Third, we received results from the Strategic Pay remuneration survey conducted for ACE New Zealand. These sources are the basis for the data in the following analysis.

4.3 Information from the New Zealand Infrastructure Commission

The NZIC has conducted research on the cost of infrastructure in New Zealand, the value produced and other relevant information. Much of the work done by ACE members supports the construction and maintenance of publicly-owned or privately-owned infrastructure. The information from the Infrastructure Commission provides a way to measure the value of infrastructure, which then provides a method for estimating the value of better infrastructure. There are two key sources:

- NZIC (2021)[3] examined infrastructure investment and estimated the optimal level of spending. That report provided key values for the efficiency of infrastructure spending and the responsiveness of economic activity (gross domestic product – GDP) to infrastructure.
- NZIC (2024)[4] investigated asset values and depreciation. It provided figures for infrastructure spend and the rate of depreciation.

First, we calculate the value that infrastructure, on average and in general, creates in the New Zealand economy. A key concept here is elasticity, which is an economic term for responsiveness. We want to know how responsive the economy is to new infrastructure spending. NZIC (2021) based its analysis on an elasticity of GDP to infrastructure spending of 0.1, relying on the economic literature. We cite page 18 of the report here for clarity:

> *Figure 11 summarises Bom and Ligthart's (2014) estimates of the output elasticity of infrastructure investment, which reflects the degree to which increased investment raises GDP, based on a systematic review of empirical studies. They*

[3] New Zealand Infrastructure Commission. (2021). Investment gap or efficiency gap? Benchmarking New Zealand's investment in infrastructure. Wellington: New Zealand Infrastructure Commission / Te Waihanga.

[4] New Zealand Infrastructure Commission. (2024). Build or maintain? New Zealand's infrastructure asset value, investment, and depreciation, 1990–2022. Wellington: New Zealand Infrastructure Commission / Te Waihanga.

estimate that a 1% increase in the total value of public infrastructure provided by central government will increase GDP by around 0.12% per annum in the long run.

That is, if infrastructure increases by 1 percent, annual GDP growth will be 0.12 percent higher, which the report rounds down to 0.1 percent.

Another key part of the calculation is depreciation. NZIC (2024) reported that New Zealand spent, on average, 5.8 percent of GDP annually on infrastructure. However, 58 percent of that spending went towards repairing and replacing old assets. As a result, the 5.8 percent can be divided into 3.4 percent to cover depreciation and 2.4 percent to add new infrastructure.

The third key part of the calculation is delivery efficiency, which captures how efficiently New Zealand converts spending into asset value. NZIC (2021) reported that the country had a delivery efficiency of 0.81, within the range of other advanced economies. That figure means 81 percent of the money spent on infrastructure is converted into asset value.

4.4 Economic contribution of current infrastructure spending

With those three elements, calculating the contribution of infrastructure from there becomes a mechanical process, as shown in Table 1. There are a few parts to the calculation. First, the value of infrastructure is updated from 2022 to 2025. Next, the increase in the value of infrastructure in 2025 is calculated, based on the spend that year. That spend on infrastructure is then converted into its annual impact on GDP. Finally, the annual impact on GDP is capitalised for the lifetime of the assets created in 2025 through the infrastructure spending.

Table 1 Calculation of the economic contribution of infrastructure spending

Based on information from the New Zealand Infrastructure Commission

	Value	Source
GDP, 2025	$430b	Statistics NZ (2025)[5]
Value of infrastructure, 2022	$287b	NZIC (2024)
Depreciation rate of infrastructure	3.4%	See text
Annual growth of infrastructure	2.4%	See text
Growth, 2022-2025	7.5%	2.4% for 3 years
Value of infrastructure, 2025	$308b	$287b x 1.075
2025 infrastructure spend, 5.8% of GDP	$25b	NZIC (2024)
2025 spend times delivery efficiency	$20b	See text; $25b from above
Increase in asset value	6.5%	$20b ÷ $308b
Increase in annual GDP (%)	0.65%	See text; 0.1 x 6.5%
Increase in annual GDP ($)	$2.8b	0.65% x $430b
Multiplier to capitalise annual value	11.9	Accounts for 3.4% depreciation and 5% discount rate
Total present value from one year of infrastructure spending	**$33.5b**	

Source: NZIER

The calculations in Table 1 indicate that the approximately $25 billion that New Zealand is estimated to have spent on infrastructure in the year to March 2025 will produce a total of $33.5 billion in value for the economy, in net present value terms. This result suggests that infrastructure spending in New Zealand yields a net economic benefit. There are several factors that influence the result:

- Higher elasticity – greater responsiveness of the economy to infrastructure spending – would increase the final value
- Higher delivery efficiency would increase the conversion of spending to asset value and increase the final result
- Slower depreciation would increase the final value
- A lower discount rate would increase the final value.

The opposites of the above are also true. For example, a lower delivery efficiency would reduce the final result. Also, the calculation is sensitive to the starting ratio of infrastructure asset value to GDP. The higher the existing value of infrastructure, the lower the impact on GDP.

4.5 Calculation of the economic contribution of consultants

The calculation of the economic contribution of consultants involves adjusting one parameter in the analysis above and comparing the two resulting values. Consultants improve infrastructure spending. With their support, infrastructure spending produces

[5] Size of the economy in current prices, March 2025 year; https://www.stats.govt.nz/indicators/gross-domestic-product-gdp/

more lasting value because solutions are achieved faster and/or they are better. This impact can be captured by the delivery efficiency parameter. Currently, the delivery efficiency parameter is estimated by the NZIC at 0.81. Without the knowledge and expertise of consultants, we can expect the delivery efficiency to be lower.

The key question is, how much improvement do consultants make on projects? Across the interviews and surveys, across the consultants and clients, there was a consistent view that professional services firms and consultants did create value. However, the exact size of the impact was hard to pin down. The interviews mostly avoided quantifying the impact, although not entirely. Half of the survey responses also failed to quantify the impact, citing that it was too difficult or impossible. Nevertheless, some consultants and clients offered their views on the size of the impact. From consultants, the average of responses was 42.5 percent, ranging from 5 percent to 50 percent 'or more'. For clients, the average was 18.8 percent, ranging from 10 percent to 30 percent.

In Table 2, we calculate the contribution to the economy from infrastructure spending, assuming that the benefit from consultants no longer occurs. We do this by reducing delivery efficiency by 18.8 percent, changing it from 0.81, used above, to 0.658.[6]

Table 2 Contribution of infrastructure spending, with lower delivery efficiency

Delivery efficiency reduced by 18.8%

	Value	Source
GDP, 2025	$430b	Statistics NZ (2025)[7]
Value of infrastructure, 2025	$308b	$287b x 1.075
2025 infrastructure spend, 5.8% of GDP	$25b	NZIC (2024)
2025 spend times delivery efficiency	$16.4b	Assumes delivery efficiency of (0.81 x (1 - 0.188))
Increase in asset value	5.3%	$16.4b ÷ $308b
Increase in annual GDP (%)	0.53%	See text; 0.1 x 5.3%
Increase in annual GDP ($)	$2.29b	0.53% x $430b
Multiplier to capitalise annual value	11.9	Accounts for 3.4% depreciation and 5% discount rate
Total present value from one year of infrastructure spending (lower delivery efficiency)	**$27.2b**	

Source: NZIER

Table 2 shows that a reduction in delivery efficiency reduces the conversion of current spending into asset value. As a result, the total present value of new infrastructure over time is reduced. Assuming that delivery efficiency is reduced by 18.8 percent reduces the net present value of one year of infrastructure spending by $6.3 billion (the difference between $33.5 billion in Table 1 and $27.2 billion in Table 2).

To create this benefit, a portion of the infrastructure budget must be allocated to consultants. Turning to our survey results, we found that clients estimated that 12 percent

6 That is, 0.81 x (1 - 0.188), which multiplies the existing efficiency by one minus the benefit of using consultants. This simulates a situation in which the consultant impact is removed.

7 Statistics NZ. (2025). Size of the economy in current prices, March 2025 year. https://www.stats.govt.nz/indicators/gross-domestic-product-gdp/

of their budgets were spent on consultants. Consultants were asked a different question: they were asked the percentage of budgets that were spent on ACE members, which they estimated to be 8.3 percent. For this calculation, we use the higher figure from the client survey. As shown in both Table 1 and Table 2, estimated spending on infrastructure in 2025 was $25 billion. If 12 percent of that figure was spent on consultants, that amounted to $3.0 billion.

These calculations can be summarised:

- Annual spending on consultants for infrastructure projects: $3.0 billion
- Benefit from this spending: $6.3 billion
- Net benefit from this spending: $3.3 billion
- Benefit-cost ratio from spending on consultants for infrastructure: 2.1.

For every dollar that New Zealand spends from its infrastructure budget on professional consulting services, it receives more than two dollars of value.

4.6 Strengths and limitations of this calculation

There are several strengths to this method of calculating the total impact. It is largely based on values from government agencies. Also, NZIC (2021) based its analysis on the economic impact from central government spending, but cited research showing that this value was conservative. Importantly, this method allows us to calculate an economic impact based on an estimate of the benefit produced by consultants, rather than the costs of supplying services. Finally, we have detailed the calculations, so they can be recalculated with different assumptions if desired.

There are limitations. One limitation is that the calculation is focused just on infrastructure spending, so it does not capture all the other kinds of work that ACE members do. However, the benefits and costs estimated are not limited just to ACE members, but include all professional consulting services of this type. Thus, this is not the value specifically from ACE members. Finally, it does rely on data collected from a survey with a small sample size. The figures could change if a different survey were conducted. However, we also believe that the figures are sensible and that the basic findings would hold nevertheless.

5 Calculating the value of consulting: cost method

5.1 Introduction to the cost method

Interviews with consultants and economic theory provided several reasons that clients choose to hire consultants:

- Clients need the knowledge and skills that consultants bring, but only in small amounts. They might need those specialised skills for 50 hours a year, for example.
- By focusing on specialised topics full-time, consultants maintain their knowledge and skills and learn up-to-date information from the industry and colleagues. Generalists working in client organisations do not have the same focus.

- Consultants also learn by doing; interviews suggested that training was at least 70 percent on-the-job learning. They are exposed to similar problems repeatedly as they work for different clients. By contrast, a client organisation might need those specialist skills once per year, reducing the opportunities for learning.
- Ultimately, it is about cost. It is cheaper for clients to use consultants for specialist work rather than to maintain the skills, experience and training in-house.

The cost method estimates the cost of maintaining consultants in-house. It takes the perspective that a consultant could be retained in-house on a full-time salary, ready to be used on projects when the need arises. This was an option that came up in interviews with consultants, that an alternative for clients would be to have full-time staff.

5.2 Calculation of the cost to retain experts in-house

The data used in these calculations are from the sources already noted.

The key idea is that a client could have an in-house expert rather than a consultant if it were to pay the cost of retaining the expert full-time. Currently, the consulting system provides those services at a lower cost (and lower risk). The value can be represented by a second-best world in which clients have to include all experts as staff members.

The calculation uses data from consultants and clients regarding annual numbers of consultant experts, projects, and clients to estimate the number of full-time employees that would need to be employed by clients. Essentially, every example of an individual consultant working for a unique client could be turned into a full-time position. Counting up those positions and assigning a cost to them would estimate the value that consultants provide.

This approach does not account for several complications:

- It is unclear whether the number of experts would be available.
- One full-time position could be split among clients, so assigning a full-time job to each consultant/client pairing might overstate the theoretical cost. However, that kind of sharing would generate the same sort of coordination and scheduling problems that the current consulting system already solves. It would be a halfway position between in-house staff and consultants.
- Clients might currently use multiple consultants with similar knowledge or skills. They might be able to combine those pieces of work into a single position, using a larger percentage of an expert's time.
- In this theoretical, second-best world, clients might forgo these services due to the expense. If that were the case, this method would produce an overestimate of the value of consultants.

Despite these potential issues, we make these calculations to demonstrate the avoided costs of an alternative system, or equivalently, the cost savings from the current system. They quantify the costs that clients currently do not incur, which is one way to represent the value that consultants provide.

Table 3 presents the data and calculations for the additional costs that clients would incur if they moved from the current consulting arrangement to maintaining staff in-house. It is based on a couple of numbers provided by Strategic Pay using data from the 2025

remuneration survey: the average annual compensation for ACE members and the average annual turnover per consultant. It is also based on a figure from the survey of consultants, which found that staff, on average, worked for just over 16 clients per year. An alternative way to understand this figure is that each consultant works for a bit under three weeks on each engagement during the year. This figure can be used to calculate the amount that clients currently pay per consultant that they use. Then, the total cost of paying the salaries and benefits of those same people as employees can be calculated.

Table 3 Calculation of the avoided costs from engaging consultants

Information sources noted in table

	Value	Source
Staff in ACE New Zealand member firms, 2025	16,000	ACE New Zealand
Average annual compensation	$136,843	Strategic Pay remuneration data
Clients per staff per year (#)	16.4	Survey of consultants
Turnover per FTE	$340,383	Strategic Pay remuneration data
Turnover per FTE per client	$20,755	Turnover per FTE ÷ clients per staff per year
Additional cost per client per FTE	$116,088	Compensation – turnover per client
Total additional cost	**$1.9b**	Additional cost per client per FTE x total staff

Source: NZIER

The calculations in Table 3 show that each client pays just over $20,000 per full-time equivalent (FTE) in the consulting firms. This is a fraction of the total annual salary and compensation of an ACE consultant, which Strategic Pay found to be $136,843. The difference between these two figures is over one hundred thousand dollars. It represents the extra cost that clients currently do not have to shoulder, but would theoretically incur for each staff member if they were to move to doing all work in-house. Multiplying that difference by the total number of people in ACE New Zealand member firms produces a result of $1.9 billion. This is the extra cost that clients currently avoid by using consultants. As such, it is a measure of the value that ACE New Zealand members produce and the efficiency gains in the economy that result from having the right balance between in-house staff and on-call experts.

5.3 Strengths and limitations of this calculation

The calculations are *prima facie* plausible:

- If we make the same calculation but assume that consultants work for just two clients per year, the result becomes negative. This result has some appeal. If a client is using a consultant half-time or full-time, it might be better to have that expert as an employee. There are other reasons to continue to use external consultants. For example, they stay connected to others in their profession, and their contracts can be easily ended. Nevertheless, the calculation that paying consulting rates for a half-time person tends to be expensive suggests that the method is sensible.
- The additional cost per staff is affected by the turnover per FTE. If consulting revenues or chargeability is lower – reflecting lower payments from clients – then the additional

cost to clients of bringing a consultant in-house is higher. This result is sensible: an employee would be paid regardless, but clients pay consultants only for work done.

- Again, setting up the method transparently provides a basis for testing assumptions and assessing their impacts. The results hinge on the salaries of consultants, the revenues per consultant, and the number of clients who share the cost of each consultant. These values can all be tested to determine the impact on the overall results. For example, the lowest number of consultants per year indicated in the survey of clients was five. If that were the average across the industry, the average cost savings per consultant would be about $70,000, for a total avoided cost of $0.8 billion. This is a smaller impact than estimated before, but it is still worthwhile for clients.

Nevertheless, there are limitations to the method used. First, some of the information has come from a survey of a small sample of selected respondents. While the information aligns with information collected through interviews, it could be tested with a larger study. Second, the analysis is based on remuneration data. The data cover most of the sector, but using different summary statistics (e.g. medians rather than averages) would produce different results. The analysis also relies on assumptions about the changes that would take place in the absence of consultants, because that is how the avoided costs have been constructed. The client organisation might be able to construct positions or roles that involve part-time work, job-sharing, or other approaches to reduce their costs. We do know that changing the input data and assumptions would alter the results, but we are nonetheless confident that this avoided cost method provides a useful estimate of the value of consultants.

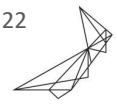
5.4 Sensitivity analysis of the calculations

We conducted a sensitivity analysis of the calculations, focusing on key inputs to the calculations.

In the calculation of the impact that consultants have on the value of infrastructure in New Zealand, a key input was the improvement that consultants make in the delivery efficiency of projects. The Infrastructure Commission provided the base efficiency of 81 percent in New Zealand. Our research found that clients believed that consultants generated an 18.8 percent improvement in projects, which we applied to the delivery efficiency. Offsetting the value of improvements against costs, we estimated that the net benefit of consultants in infrastructure was $3.3 billion.

We tested the impact of that assumption by varying the improvement factor from 10 percent to 25 percent. We calculated the present value of the benefit and subtracted the estimated cost of consultants ($3.0 billion annually). The results are shown in Figure 2. It shows that the net benefit increases linearly as the improvement factor increases, keeping the cost constant. That is, the more that consultants contribute to the delivery efficiency in infrastructure, the greater the net benefit to the country. A 10 percent improvement factor generates a small net benefit of $0.4 billion, while a 25 percent improvement factor produces net benefit of $5.4 billion.

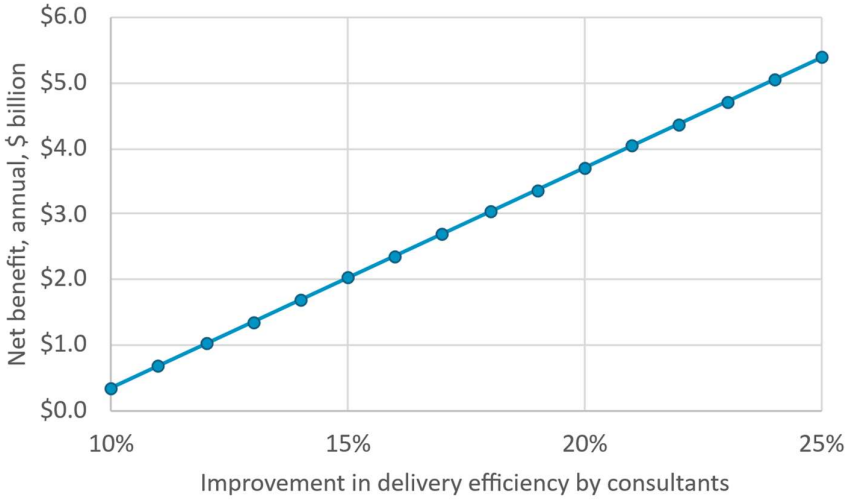
At a 10 percent improvement, the benefit-cost ratio (BCR; benefits divided by costs) is just 1.1, while at a 25 percent improvement, the BCR is 2.8. These results show that even at the lowest level of improvement indicated by our client survey, spending on consultants



generates a small net benefit. At higher levels of improvement, consistent with our work and other research, $1 of spending on consultants can generate $2 to $3 dollars of benefits.

Figure 2 Economic contribution from consultants in infrastructure

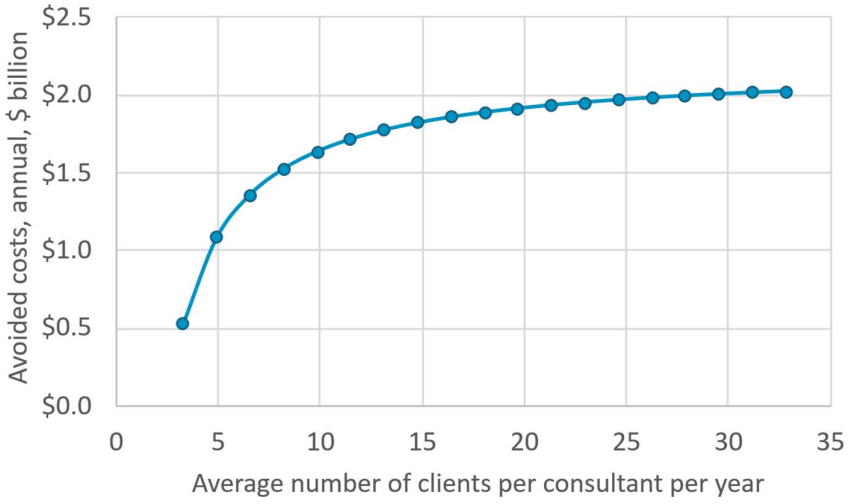
Sensitivity analysis showing impact of performance assumption on net benefit



Source: NZIER

For the avoided cost calculation, a key variable is the number of clients per consultant per year. The intuition is that, if consultants spend their time working for just one or two clients, they are more easily replaced with full-time employees. As consultants work for more clients during a year, clients receive more benefit from being able to access experienced people on an as-needed basis. We varied the number of clients per consultant around the average from our research. The average was 16.4, and we varied the number from 20 percent of that (3.3) to 200 percent (32.8). The results are shown in Figure 3. They show that the calculation of avoided costs is affected by the number of clients served by each consultant, as expected. The figure also shows that the relationship is non-linear: while the result is markedly lower below 8.2 clients/consultant, one-half the average we found in our research, it then stays between $1.5 billion and $2.0 billion from there until the average number of clients per consultants reaches about 30. Given the data collected in the survey, in which the lowest average number of clients per consultant was 10, the sensitivity analysis suggests that the estimate of avoided costs is comfortably between $1.5 billion and $2.0 billion per year.

Figure 3 Avoided costs by number of clients per consultant



Source: NZIER

The sensitivity analysis examined the effect of a key variable on each of the two calculations of economic impact. It shows that the calculations are sensitive to the inputs used. It also suggests that the main implications of the analysis are robust to different input assumptions:

- Using consultants in designing and building infrastructure creates positive net benefit for New Zealand, with the value of the benefit linked to the level of improvement they create.
- Working with consultants creates cost savings for clients, compared to maintaining the same skills and experience in-house. The costs savings are somewhat affected by whether the consultant is hired for a week, a month or longer, but are also remarkably stable.

6 Discussion and conclusion

6.1 Quantifying the benefits that consultants create

ACE New Zealand, which represents professional services firms working in the built and natural environment, asked NZIER to help it understand the economic value that its members create for New Zealand. We used economic theory and prior research to develop analytical methods that allowed us to estimate this economic value. One estimate of the value is from the avoided cost: clients avoided $1.9 billion in costs by using consultants, an estimate that included just ACE New Zealand members. A second estimate was based on national-level spending on infrastructure. That analysis found that every dollar spent on consultants – not just ACE New Zealand members – in infrastructure produced 2.1 dollars of benefit. The net benefit was $3.3 billion per year in increased infrastructure asset value.

We can combine these results to produce a third estimate. From the remuneration survey, we estimate that total revenue for ACE New Zealand members in 2025 was $5.4 billion,

calculated as turnover per FTE multiplied by the number of ACE New Zealand members. From the analysis of infrastructure spending, we found a benefit-cost ratio of 2.1 for spending on consulting services. Combining these figures, we estimate that the total benefit produced by ACE New Zealand members is $11.4 billion, with a net benefit (benefits less costs) of $5.9 billion in increased GDP annually.

6.2 How those benefits are produced

Clients and consultants alike provided similar descriptions of the ways that consultants create value. A usual typology is that engagements can be based around three things:

- Capability – Consultants provide specialised skills and knowledge gained from focused work on specific types of projects. This is specialised knowledge that clients don't tend to have, because they are focused on more common tasks – the 'meat and potatoes' work. Dividing the work up this way – specialised versus generalised – is well understood by economists as a driver for the existence of firms. It's a way to keep specialised knowledge and resources managed and maintained. Client and the whole system benefit from having access to up-to-date, specialised experts.
- Capacity – Consultants also provide short-term capacity for all kinds of projects. Clients want to have a core staff that benefits from stable employment. By using external providers, clients can manage their workflows without having to staff up or let employees go. Professional services firms can manage the ups and downs across multiple clients, which smooths out the variability in workload. This arrangement works well across the system, including clients and their employees, as well as professional services firms and their consultants.
- Cover – Clients may need extra support for various reasons. Sometimes, it's about getting an external, independent support for an unpalatable course of action. Sometimes, it's about having an extra confirmation or validation that a design or proposal is correct. Consultants provide that external perspective, and professional services firms have developed the reputation and mana to be the robust, independent voice. Clients and the system benefit by having more options for acting and more assurance when they do.

As we noted, this typology provides a useful extension to one already in use in economics. It creates a notional space in which to locate different projects and determine whether they are likely to be better handled by in-house staff or external consultants.

The final source of value, which applies across all three types, is the reduction in risk. By applying specialised knowledge, consultants reduce the risk involved in designing and executing work. By serving as excess capacity, they reduce the risks of over-staffing or under-staffing client organisations. They can focus on their core work, knowing they have options if the workload changes. Finally, consultants reduce the actual and perceived risks for clients by providing expertise and reputation, increasing the general level of comfort with the choices that client organisations make.

6.3 Getting the most from consultants

The information we gathered provides some indications about how clients can get the most value from consultants. These suggestions are not intended to be exhaustive, but some ideas from this research are:

- **Understand the different roles –** consultants and clients do different things. They contribute differently to projects, and they support client work in distinct ways. Understanding how consultants are bringing capability, capacity and cover to a project is key for understanding their specific contributions. For example, one client explained their perspective on consultants: 'They are there to do a job, finish, and go.' At the same time, consultants also need to understand their clients, how they operate and the context for each project.
- **Consider the role in design –** the question of when to bring in consultants is not simple. Sometimes, the client can design the solution and then hire a consultant to make it happen. That approach may not get the benefit of all the experience that consultants bring. They may be able to create solutions the client didn't even consider. One consultant discussed a specific issue with a large client that worked with many consultants: the client identified a problem and decided on a solution, then shared it with consultants. The interviewee believed a better solution could have been found – in fact, described a better solution in the interview – if consultants had been involved in the solution design phase.
- **Manage and apportion risk appropriately –** risk is a major concern for both client and consultant organisations. Some risk can be reduced by applying knowledge and experience to problems; both clients and consultants can contribute to that process. Other risk cannot be removed but has to be shared among the parties involved. There was some concern among consultants that clients were currently trying to offload too much risk on to consultants. One interviewee pointed out that the process only leads to risk-averse behaviour among consultants, including expensive over-engineering of work. The attempt to reduce the costs of risk ends up creating more actual project costs. Sensible conversations about risk can make the whole system work better.
- **Consider formal evaluation –** Most projects are not formally evaluated. Most interviewees didn't seem to think evaluation was required. In particular, consultants said that securing new work was an indication that past work had gone well. However, there are at least two reasons to consider formal evaluation. First, it is a way to turn experience, which sits with individuals, into explicit knowledge. Consulting firms noted that they had issues with succession and that the lack of formal systems and knowledge was a business risk. Second, experience-based knowledge is one of the main assets that consultants have and tout. Having a formal evaluation process, even a small, simple one, can improve the knowledge-generation process and signal to clients that consultants are serious about improving their skills.
- **Create good governance arrangements –** good governance is key to successful engagements and value realisation. All the suggestions in this list touch on governance to some extent: roles should be defined, the interaction of design and build is important, risk management is a key governance activity, and evaluation provides feedback for those involved in governance. Of course, it is also about matching the arrangement to the project. A short, simple project requires less governance than a long, complex one. However, being mindful of project governance at the outset rather than jumping in and getting started can reduce misunderstanding and tension (the incomplete contract problem) in the long term.

6.4 Final thoughts

We'll give the final word to the clients who participated in our interviews. One said, 'Consultants are really useful'. That person endorsed using consultants 'to the right amount'. Much of what we have described in this report concerns determining the optimal amount: how much capability and capacity should be maintained within client organisations to support their core work, and how much should be maintained by professional services firms to provide specialist and flexible services as needed. As the economic calculations suggest, New Zealand has done a good job of figuring out the balance. It is getting considerable value from the professional services firms that work on its built and natural environment.

7 References

ACEC Research Institute. 2022. *2022 Economic Assessment of the Engineering & Design Services Industry*. https://www.acec.org/wp-content/uploads/2024/03/ACEC-Research-Institute-2022-Economic-Assessment-Final.pdf.

Aliakbarlou, Sadegh, Suzanne Wilkinson, and Seosamh B. Costello. 2018. 'Rethinking Client Value within Construction Contracting Services'. *International Journal of Managing Projects in Business* 11 (4): 1007–25. world. https://doi.org/10.1108/IJMPB-07-2017-0076.

Aluko, Olusola Ralph, Godwin Iroroakpo Idoro, and Modupe Cecilia Mewomo. 2020. 'Relationship between Perceived Service Quality and Client Satisfaction Indicators of Engineering Consultancy Services in Building Projects'. *Journal of Engineering, Design and Technology* 19 (2): 557–77. world. https://doi.org/10.1108/JEDT-03-2020-0084.

Appelbaum, Steven H., and Anthony J. Steed. 2005. 'The Critical Success Factors in the Client-consulting Relationship'. *Journal of Management Development* 24 (1): 68–93. https://doi.org/10.1108/02621710510572362.

Coase, Ronald H. 1993. 'The Nature of the Firm (1937)'. *Economica* 4: 396–405.

Engineering New Zealand. 2023. 'Engineering Worth up to $18b a Year to Economy | Engineering NZ'. https://www.engineeringnz.org/news-insights/value-of-engineering/.

Flyvbjerg, Bent, and Dan Gardner. 2023. *How Big Things Get Done: The Surprising Factors That Determine the Fate of Every Project, from Home Renovations to Space Exploration and Everything in Between*. First edition. Currency.

Gable, Guy G. 1996. 'A Multidimensional Model of Client Success When Engaging External Consultants'. *Management Science* 42 (8): 1175–98. https://doi.org/10.1287/mnsc.42.8.1175.

Grufman, Niklas, and Cornelia Larker. 2020. *Assessing the Value of Advice*. https://www.diva-portal.org/smash/get/diva2:1451948/FULLTEXT01.pdf.

Hasam, E S, and S H Hasam. 2023. 'Quality Determinants of Client Satisfaction: A Case Study of ACE – Australian Consulting Engineers, Sydney, Australia | IntechOpen'. https://www.intechopen.com/chapters/88849.

Klein, Peter G. 2005. 'The Make-or-Buy Decision: Lessons from Empirical Studies'. In *Handbook of New Institutional Economics*, edited by Claude Menard and Mary M. Shirley. Springer-Verlag. https://doi.org/10.1007/0-387-25092-1_18.

Klein, Peter G, and João Fernando Rossi Mazzoni. 2008. 'The Make-or-Buy Decision Revisited'. In *Handbook of New Institutional Economics*.

Landy, M F B, S Sousa, and F Romero. 2020. 'Service Quality Factors in the Construction Sector: A Literature Review'. *IOP Conference Series: Materials Science and Engineering* 800 (1): 012035. https://doi.org/10.1088/1757-899X/800/1/012035.

McIntyre, Tiffany, Mark M. J Wilson, Caroline Saunders, et al. 2019. *Governing Value Creation and Capture in New Zealand Agribusiness Value Chains*. Research Report No. 355. Agribusiness and Economics Research Unit.

McKinsey Global Institute. 2017. *Reinventing Construction: A Route to Higher Productivity: Executive Summary*.

McLeod, Sam, and Jake H. M. Schapper. 2024. 'Understanding Quality in Planning Consultancy: A Review and Synthesis of the Literature'. *Journal of Planning Education and Research* 44 (1): 39–51. https://doi.org/10.1177/0739456X20943928.

Mosonyi, Szilvia, Laura Empson, and Jean-Pascal Gond. 2020. 'Management Consulting: Towards an Integrative Framework of Knowledge, Identity, and Power'. *International Journal of Management Reviews* 22 (2): 120–49. https://doi.org/10.1111/ijmr.12218.

Motamedi, Kurt. 2015. 'A Framework To Evaluate Consulting Efforts'. *Graziadio Business Report* 18 (1). https://www.researchgate.net/profile/Kurt-Motamedi/publication/282200133_A_framework_to_evaluate_consulting_efforts_Evaluation_research_and_consulting_engagements/links/569d4ff008ae950bd7a6765f/A-framework-to-evaluate-consulting-efforts-Evaluation-research-and-consulting-engagements.pdf?_sg%5B0%5D=started_experiment_milestone&origin=journalDetail.

PwC. 2020. *Value of Engineering in New Zealand*.

PwC. 2021. *Update to Economic Contribution of Engineering Report*.

Samson, Danny, and Rod Parker. 1994. 'Service Quality: The Gap in the Australian Consulting Engineering Industry'. *International Journal of Quality & Reliability Management* 11 (7): 60–76.

Snow, Val, Daniel Rodriguez, Robyn Dynes, et al. 2021. 'Resilience Achieved via Multiple Compensating Subsystems: The Immediate Impacts of COVID-19 Control Measures on the Agri-Food Systems of Australia and New Zealand'. *Agricultural Systems* 187 (February): 103025. https://doi.org/10.1016/j.agsy.2020.103025.

Sones, Andie, Melissa Marinelli, Sally Male, and Ghulam Mubashar Hassan. 2022. 'Competencies That Lead to High Performance as a Project Engineer in a Management Consulting Engineering Company'. In *REES AAEE 2021 Conference: Engineering Education Research Capability Development*. https://doi.org/10.3316/informit.345412353620829.

Stahl, J. 2018. 'Impact of Management Consulting: Perspectives on Value Creation, Performance Evaluation, and Governance of the Client-Consultant Relationship'. PhD Thesis, Otto von Guericke University Magdeburg. https://repo.bibliothek.uni-halle.de/bitstream/1981185920/13491/1/Dissertation%20-%20J.%20Stahl%20-%20Impact%20of%20Consulting.pdf.

Stroe, Gabriel Sorin. 2013. 'Structural Analysis of Engineering Consulting and Design Industry'. *Management & Marketing* (Bucharest, Poland) 8 (1): 41–62.

Tadelis, Steven. 2002. 'Complexity, Flexibility, and the Make-or-Buy Decision'. *American Economic Review* 92 (2): 433–37. https://doi.org/10.1257/000282802320191750.

Teece, David J., Gary Pisano, and Amy Shuen. 1997. 'Dynamic Capabilities and Strategic Management'. *Strategic Management Journal* 18 (7): 509–33. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7%253C509::AID-SMJ882%253E3.0.CO;2-Z.

Thomas, H. 2011. 'The Value of Real Consultancy*'. *The APPEA Journal* 51 (2): 701–701. https://doi.org/10.1071/AJ10081.

Thomas Ng, S., and Lai-Kit Chow. 2004. 'Framework for Evaluating the Performance of Engineering Consultants'. *Journal of Professional Issues in Engineering Education and Practice* 130 (4): 280–88. https://doi.org/10.1061/(ASCE)1052-3928(2004)130:4(280).

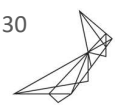
Trevelyan, James. 2012. 'Understandings of Value in Engineering Practice'. *2012 Frontiers in Education Conference Proceedings*, 1–6. https://ieeexplore.ieee.org/abstract/document/6462258/.

Trevelyan, James, and Bill Williams. 2015. *Guide for Value Generation in the Engineering Enterprise*.

Veres, Zoltan, and Katalin Varga-Toldi. 2021. 'ERIP: Service Quality Model of Management Consulting Projects'. *The Journal of Business & Industrial Marketing* (Santa Barbara, United Kingdom) 36 (7): 1090–102. https://doi.org/10.1108/JBIM-05-2020-0226.

Walker, Paul. 2019. *Theory of the Firm: An Overview of the Economic Mainstream*. Routledge.

Williamson, Oliver E. 1987. *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*. 1st Free Press pbk. ed. Free Press ; Collier Macmillan Publishers.



Appendix A Sources of information for this report

A.1 Interviews with consultants and clients

We provided an information sheet to all interviewees before the interviews. The sheet was similar for both groups, but the questions were targeted to their different roles.

A.1.1 Context for interviews

Kia ora. I'm working with ACE New Zealand to understand the value that consultants bring to the work they do. You have been asked to talk with me because of your knowledge and experience in the sector. I'm grateful for your participation in this project.

Who am I? I'm an economist with the NZ Institute of Economic Research. I've been a consultant and researcher for 30 years in New Zealand and California. I investigate how productivity happens and improves, sometimes with data analysis and sometimes by talking with people.

General framework: Since I am a consultant, I am approaching this work with first-hand knowledge of how consulting happens. There will be differences between your work and mine but also similarities. In addition, there is economic research on why some work is done in-house and other work is outsourced. The research generally falls under 'the theory of the firm'. The key concern is summarised as the 'make-or-buy problem'. I am taking two approaches to understanding the consulting industry:

1 Consultants have special skills and assets

- People – skills and experience
- Tools and equipment
- Business processes – manage risk, learn from prior work
- Social capital – networks, etc.

2 Clients get better outcomes

- Faster
- Lower cost
- Better quality
- Lower risk
- Less pain – less management, less PITA

The project is starting with a series of interviews so that I can get the lay of the land. I want to understand how your consulting happens and what the key drivers are. I am comparing what you experience against the economic ideas I'm bringing to the project. A later stage of the project will include a survey to check my understanding with a sample of ACE members.

This is a semi-structured interview. I have a series of questions that set out the topics and serve as a guide to keep me on track. Not all the questions will relate to your area of expertise and I won't necessarily ask them all. I will also follow the conversation where it leads and probe things that seem interesting. I am interviewing you as an expert informant, so your informed consent is assumed.

A.1.2 Questions/topics (consultant interviews)

1 Could you tell me a bit about your business? What work do you do? Who are your clients?

2 Could you give me a sense of the size of the business? How many employees, how many projects or clients, how many offices or locations?

3 Do you specialise in a particular type of work? What is it, and who else does it?

4 Have there been any major change points in the past 10 to 15 years for your business? Why?

5 Why do clients hire you?

6 How have you tested your value proposition to clients? Do you measure anything, and how?

7 Could you tell me about your staff? What is the structure of the workforce (hierarchy)? What role does experience play? What training do you provide?

8 Could you tell me about your business processes? How specialised are they to your business? How does your prior work inform your current and future work?

9 Let's talk about risk management. What risks do you need to worry about and how do you handle them? How does that compare with risks that clients have?

10 What role do personal relationships and professional networks play in the industry? Do they play a role in client relationships?

11 Do people move between consulting and client organisations, and how much does that happen?

12 What are the key drivers of success in your industry?

13 Is there anything you think I've missed?

A.1.3 Questions/topics (client interviews)

1 Could you tell me a bit about your organisation? What work do you do? How do you use (ACE New Zealand) consultants?

2 Could you give me a sense of the size or value of the consulting you use? How many projects or consultants?

3 Have there been any major changes in the past 10 to 15 years in your use of consultants? Could you tell me about that?

4 For your work that uses consultants, do you also do similar work in-house?

5 How do you decide to use consultants for a project? How do you then choose the provider?

6 Have you done anything to measure the impact of consultants? Do you measure anything, and how? What have you learned?

7 Could you compare your staff to those of consulting organisations? Are there differences in experience, training, or specialisation, or in other areas?

8 Could you describe how your organisation makes improvements over time? How does it learn from prior work and apply that to current work?

9 Does your use of consultants affect your risk management? How?

10 What role do personal relationships and professional networks play in the industry?

11 Do people move between consulting and client organisations, and how much does that happen?

12 In your opinion, what are the key drivers of success for consultants?

13 Is there anything you think I've missed?

A.2 Email survey of consultants and clients

A.2.1 Context for the survey

We reviewed the information available from published sources and the information we obtained from the interviews. We found that there were two issues with using the information for calculating the value of consulting for this project:

14 The published sources are generally focused on the performance of whole sectors, such as roading of infrastructure. It does not provide detail necessary to estimate the performance of consulting experts, much less the impact of ACE members.

15 The interviews gathered information on specific companies and projects, but not quantitative data that could be used to estimate the economic impact.

ACE members have been involved in quite a bit of study and investigation recently. ACE has held workshops focused on developing professional practices, and they commissioned a remuneration survey from the specialist company Strategic Pay Limited. As a result, we decided we could encounter some respondent fatigue if we tried to administer a full survey of members.

The alternative we chose was a short survey sent by email to targeted members. They were selected to be representative of the industry in terms of size and focus. We also conducted an email survey of a few clients of ACE members. They aim was to collect data from both sides of the consulting relationships. We decided to focus on the main task, estimating the economic value of consulting, and administer the shortest survey possible to achieve that task.

The questions focused on two things: the use of consultants and the impact that consultants had. We asked about the number of consultants and projects per year. We also asked respondents to estimate how much benefit they obtained from consultants. For example, we asked client respondents, 'Could you estimate the level of improvement, in any, that you achieve on your projects by using a professional services consultant/firm?' We knew that this would be a difficult question, but we wanted to see how people would respond. In the end, some respondents did estimate the level of improvement, while many did not.

A.2.2 Surveys sent to respondents

The questions we sent to the **professional services consultants** were the following:

1 On average, how many **clients** does a staff member work with each year?

2 If you divided your staff into junior, mid-level, and senior consultants, how many **clients** would each level of staff work with each year?

3 On average, how many **projects** does a staff member work on each year?

4 How many **projects** does a junior, mid-level, and senior consultant work on each year?

5 ACE consultants provide specialist assistance to support large work programmes, such as land development and infrastructure. Could you estimate the portion of the total work programme budget that is spent on ACE consultants (your own firm and other firms)?

6 ACE consultants provide expertise that makes projects better. Compared to clients doing projects on their own, consultants make projects faster, more efficient, or more productive, or they achieve better outcomes for everyone. What are the one or two most important things you add to projects?

7 Could you summarise that improvement as a percentage? How much better do you make the projects that you work on?

The questions we sent to **clients** were the following:

8 How many different professional services consultants would you work with in a year?

9 How many times would you engage a professional services consultant/consulting engineer in a year?

10 How many individual consultants (number of people) does that represent?

11 We are interested in projects that use professional services consultants/consulting engineers. For your projects that use professional services consultants, what percentage of the budget would be spent on them?

12 These professional services consultants provide expertise for your projects. Could you estimate the level of improvement, in any, that you achieve on your projects by using a professional services consultant/firm, compared to doing the work entirely in-house? Could you summarise that improvement as a percentage?

A.2.3 Results from the survey

The results from the surveys are presented below. The tables provide data from the surveys, provided as central, low and high values. The low and high values are the lowest and highest values given by any respondent to the question. If one respondent gave the response 1 to 50, and all other responses fell within that range, then the low and high were 1 and 50. The central values are the averages across the respondents who provided quantitative answers. Some respondents provided ranges, e.g. 20 to 30 clients per staff member. Such a response was first assigned an average (in this case, 25), which was then used to calculate the average over all the responses.

The first table provides the results from the survey of consultants.

Table 4 Summary of results from consultants

Results from emailed survey, N = 6

Question/metric	Central	Low	High
Clients/staff	16.4	1	50+
Clients/junior staff	16.5	1	50+
Clients/mid-level staff	19.2	1	50+
Clients/senior staff	23.5	1	50+
Projects/staff	20.9	10	30
Projects/junior staff	26.0	8	60
Projects/mid-level staff	27.0	8	60
Projects/senior staff	39.8	15	100
% of project budgets spent on ACE consultants	8.3%	1.0%	15.0%
% improvement to projects	42.5%	5%	50%
Value of training as % of salary	3.9%	1.6%	10%

Source: NZIER

The responses tended to cover large ranges. Some of the variation was within firms: a single firm might have staff who worked full-time on a single project for a single client as well as staff who contributed to 50 or 100 projects per year. Some of the variation was across firms: some firms had smaller projects and more clients, while others serviced fewer clients and projects per year. There appears to be a lot of variation in the kind of work that ACE consultants do.

There are also some patterns in the data. The number of clients and projects seems to be linked: more of one implies more of the other. Also, more senior staff handle more projects and clients, while junior staff tend to focus on fewer projects and clients.

On the question of quantifying the size of the improvement that consultants produced, half of the respondents did not provide a number. Instead, they said:

- *This [is] tricky to quantify and highly subjective – the improvements are wide-ranging from design enhancements that ultimately benefit end-users, to time savings achieved through efficiency, or cost savings due to standardisation etc.*
- *This is too complex to answer when considering multiple projects and work scopes as a percentage.*

The next table provides the results from the client respondents. Clients were asked about the number of consultants they used per year, and the number of individual people as opposed to firms that provided consulting services.

Table 5 Summary of results from clients

Results from emailed survey, N = 4

Question/metric	Central	Low	High
Consultants/year		5	1,000
People/year		9	12,000
% of budget spent on consultants	12.1%	5%	21%
% of improvement to projects	18.8%	10%	30%

Source: NZIER

The number of consulting firms and individuals involved covered a large range in the responses from clients to the point that we decided not to present central values. Again, this shows the variety in the use of consultants, this time on the client side. Clients provided estimates of the value of improvements, although respondents also provided additional responses:

- *Unable to answer.*
- *Without professional services consultant we wouldn't be able to deliver our capital works programme.*
- *We need consultants to build projects. We do however find that without a proper brief and a senior team member of that consultancy leading a younger consultant, they go down rabbit holes and never fully understand the implication in $ value of a single line drawn on a piece of paper.*
- *A good design is worth its weight in gold.*

A.3 Remuneration survey from Strategic Pay

ACE runs a remuneration survey of its members, which is administered and analysed by Strategic Pay. We were provided with the detailed results for a prior survey, which provided rich data related to compensation and performance. Strategic Pay kindly provided summary data from the 2025 survey, tailored specifically to the calculation of economic value that we wanted to make. We note in this report that we use the results of the remuneration survey.