

## President's Message

### Everyone has a role in achieving best Value for Money

Hello everyone, and welcome to the Spring edition of Value Times.

In the last editions of Value Times, we've been working through the principles involved in getting best value for money.

Remember that our role in the IVMA is to help people — in any situation — get best value for money from their exercise, no matter what that exercise may be.

In this edition, we'll continue that theme.

In the most recent editions of Value Times, I've written about the need to separate *value* from *money* which is the first principle and goes to the heart of the matter.

Remember Daniel Bernoulli's comment way back in 1738. He said, "The value of an item must not be based on its price but rather on the utility which it yields." I'll keep coming back to this.

So far, we've covered the first five principles and, in this edition, I'm moving on to the sixth, which is: *Recognise that everyone has a role to play in achieving best value for money.*

It's a bit like an orchestra. You might not hear the second violins unless you're specifically listening for them but they are there and you would certainly notice if they were taken away!

Everyone has a role to play. Everyone's opinion is important.

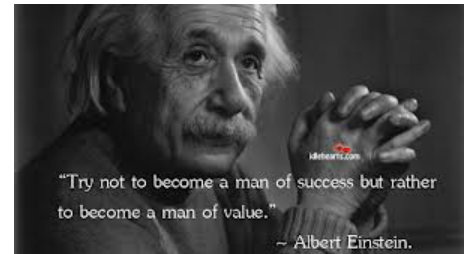
We have seen so many cases where someone who has had little to do with 'The Project' asks a question — or comes up with an idea — that transforms the project.

Typically, we have about 25 people participate in workshops, but in Singapore, where seemingly everyone wants to be involved, we have had up to 70 people participate in sessions.

Each person is invited to contribute by asking clarifying questions or by creating ideas about how the Primary Purpose can best be met.

This is always our main focus: first clarifying and then concentrating on the Primary Purpose.

Those questions might be, for example, just clarifying what has already been said or



they could be transformative, such as, "Have you thought of doing this or that?"

Often, having someone in the room who knows nothing about the project is of great benefit.

Also, when we are creating ideas as to how the Primary Purpose can best be met, an independent participant can provide a unique perspective on the subject.

One project comes to mind as I write this. The exercise was about a huge mine project (100-year life) — right at the start.

One person, who was an invited guest and experienced in this type of mine, asked a question about whether the ore should be processed at the port or at the mine site.

The result was a major change to the mine plan which involved the ore being processed at the port.

Over the mine's life, millions of dollars could be saved through this one change to the mine plan.

More in the next edition.

**Dr Roy Barton**  
President, IVMA

---

*"Often, having someone in the room who knows nothing about the project is of great benefit."*

---

## Project Cost Overruns

### Introduction

The last three editions of Value Times have covered aspects related to outturn cost overruns on major projects and programs. This article describes a proven method of more accurately predicting outturn costs and then how to manage project and program delivery to better control costs from inception.

Its application should be considered at project initiation including providing valuable analytical input to value for money labs and Value Management studies.

Major cost (and inevitably construction time) overruns will negatively impact the project or program owner's investment budget and result in delay to the implementation of subsequent investments.

---

*“Experience has led OGP to demonstrate its ‘Iron Law of Project Management’.”*

---

Oxford University's Oxford Global Projects (OGP) has over 30 years experience in examining and reporting on more than 11,000 projects worldwide with a total value exceeding \$US3 trillion.

Extensive research and comprehensive databases result in OGP being a critical source of information that can reduce risk on major infrastructure and building projects and programs.

It has pioneered research in behavioral science, including research on optimism bias, strategic misrepresentation, the planning fallacy, delivery, and reference class forecasting.

The company has three decades of advising government and business on the delivery of major projects.

Experience demonstrates that de-risking major projects is essential if resources are to be used effectively and the required end results achieved.

Experience has led OGP to demonstrate its 'Iron Law of Project Management'. Decades of data show that:

**48%** of projects are delivered on budget

**8%** are on budget AND on time

**0.5%** are on budget AND on time AND deliver the required benefits

OGP's historical risk of cost overruns by project class is summarised on the following table.

### Historical Risk of Cost Overruns

Project Type	Average Cost Overrun	% of projects with cost overruns exceeding 50%	Average cost overrun for projects exceeding 50%
Solar Power	1%	3%	50%
Wind Power	8%	0%	-
Energy Transmission	8%	4%	166%
Thermal Power	13%	14%	79%
Roads	25%	14%	111%
Defence	28%	27%	135%
Bridges	31%	20%	118%
Fixed Links (1)	32%	23%	113%
Tunnels	33%	26%	102%
Power	36%	17%	211%
Rail	42%	31%	111%
Buildings	51%	25%	158%
Museums	53%	33%	127%
Dams	90%	36%	240%
IT-led Change	107%	21%	519%
Nuclear Power	117%	53%	205%
Olympics	156%	79%	192%
(1) road / rail above / under water			

**Reference Class Forecasting**

In order to reduce the risks of falling well short of stakeholder needs, Oxford has developed ‘reference class forecasting’ (RCF) that significantly assists in predicting the actual delivery performance of particular classes of projects.

Importantly the predictions are based on decades of information on completed projects within the particular project class. RCF does not guarantee accuracy but does provide the most accurate forecast of likely project outcome.

RCF is the only existing method that, by incorporating in the reference class **all** effects on performance, takes into account the “unknown unknowns”.

This technique provides the basis on which to build an improved Product and Delivery Process to more reliably achieve stakeholders’ needs.

A prior RCF analysis of any major project could be a critical input to the ‘Issues and Concerns’ stage of a value for money study or Value Management study.

**Benchmarking**

OGP recommends benchmarking the project performance against an organisation’s own previous projects, its peers, industry, and international best practice in other sectors.

Benchmarking permits an organisation to know its own uncertainties and risks. It also improves resource allocation and increases reliability of initial project cost estimates.

**Engaging Stakeholders**

OGP places great emphasis on engaging all stakeholders from the very outset of any project or program — an initiative that will be very familiar to Value Management practitioners and their clients.

The firm makes the very valid point that “Stakeholder Relations are like bridges. Build your bridges before you need them.”

OGP also emphasises that Stakeholder Engagement needs to be based on the best available evidence.

Trust is built through a compelling narrative that focuses on outcomes first and outputs and inputs second — and we know that the ‘value triangle’ is the best place to start.

**Safeguard Contingency**

Most stakeholders have reservations regarding allocating realistic levels of contingencies to projects because realistic contingencies are often larger than stakeholders’ expectations.

OGP advises that the key to safeguarding contingency and controlling the draw down of contingency is to build a tiered regime.

The different tiers of contingency need to align with stakeholders’ risk appetite, the project’s level of ambition and the organisation’s affordability.

**Smart Scaling**

OGP data collection and analysis demonstrates that fast and modular projects perform better than slow and one-off projects.

The former realise better economies-of-scale and, more importantly, better economies-of-learning. Also, faster projects will deliver economic and financial benefits to the organisation and the economy sooner than a slow one thus optimising return on investment.

This is illustrated in the following table.

**Smart Scaling**

<b>PACE</b>	<b>Fast</b>	<b>Forced Scaling</b> Bespoke + Fast = low quality	<b>Smart Scaling</b> <b>Modular + fast</b> <b>= success</b>
	<b>Slow</b>	<b>Dumb Scaling</b> Bespoke + Slow = boondoggle	<b>Fumbled Scaling</b> <b>Modular + slow</b> = missed opportunity
		<b>One-off (bespoke)</b>	<b>Replicable (modular)</b>
<b>REPRODUCIBILITY</b>			

*“Stakeholder relations are like bridges. Build your bridges before you need them.”*

**Early Warning Systems**

In most projects management information is outdated by the time it reaches senior management. Often senior management does not act upon information because they lack understanding of the implications.

Early warning systems require short-cycle and leading indicators of project risk that communicate clearly the implications and create urgency for action by top management.

**Black Swans**

Black Swans are projects that run out of control and cause major disruptions to delivery or operations, lead to a loss of reputation, may end senior managers’ careers or even force companies into bankruptcy.

Continued on page 4

## Project Cost Overruns

Continued from page 3

Understanding the root causes of Black Swans in an organisation means that methods to minimise the probability of their occurrence can be introduced into the procurement system.

### Project Turnaround

If all else fails you will need 'project turnaround'.

If a project has gone 'off the rails' there will be a need to review the project strategy, processes, systems, people, incentives, culture and behaviours.

Then you will need to define the turnaround agenda and execute turnaround initiatives based on best practices and lessons learned from other projects.

To do this:

- Analyse the failure — brutally and honestly.
- Identify root causes of failure.
- Re-plan the project for realism.
- Define 'inchstones' (not milestones) for the turnaround.
- Plan the turnaround agenda and initiatives to deliver against each theme.
- Deliver the first few inchstones.
- Rebuild trust and confidence through communication and engagement campaign with stakeholders, sponsors and clients.

Early examination of the proposed project with the participation of all stakeholders in an open and transparent process can go a very long way to avoid getting into a 'project turnaround' situation.

### John Bushell

Chair Publications and  
Events Committee  
IVMA

## Cost and Time Overrun – A Case Study

In 2015 the British government contracted with the French company EDF to construct the 3,260 megawatt Hinkley Point C nuclear power station in Somerset.

The total capital cost was estimated to be £18bn (\$AU36bn) in 2015 for completion in 2025.

In January 2024 the contractor estimated that the completion date would be between 2029 and 2031 with total outturn cost in 2015 pounds to be between £31bn (\$AU62bn) and £34bn (\$AU68bn).

The estimated cost overrun would be respectively 72% to 89% on the original contract basis but with a significantly higher cost in current pounds when completion is actually achieved.

EDF Energy and China General Nuclear Power Group are financing construction of the power station. The latter, a junior partner, stated that it will not invest further funds in the project prompting a government spokesperson to advise that any additional costs "will in no way fall on taxpayers".

In 2006 the power station's designers, Areva SA, estimated that the price for electricity would be £24/MWh. In 2012 EDF negotiated a guaranteed fixed price for the power of £92.50/MWh over a 35-year tariff period. This price will be adjusted linked to inflation.

At the time of project inception — and subsequently — there has been significant independent advice to government that providing electricity to Britain can be achieved at significantly lower cost using off-shore and on-shore wind turbines and photovoltaic solar panels plus energy



storage and appropriate transmission infrastructure.

However, University of Sussex researchers advise that maintaining an expanding nuclear power industry in the UK subsidises the UK's nuclear-related military activity by maintaining nuclear skills.

Construction of Hinkley Point C nuclear power station has been beset with delays during design and construction. These include: changing the French design to meet British regulations, inflation, labour and material constraints and the impact of COVID-19 and Brexit.

# Forget smaller government, let's shoot for better government



The 245-tonne domed roof being placed on the first reactor building in December 2023. Photo credit: EDF

Despite this, 22,000 people and 3,500 British companies have been employed on the project to-date.

Construction reached a major milestone in December 2023 when the 14-metre high dome was placed on top of the first 44-metre high reactor building.

It would appear that where nuclear power is concerned, *caveat emptor* (the buyer beware) is a critical consideration in the decision to proceed.

## John Bushell

Chair Publications and Events Committee  
IVMA

We pay our taxes, then governments spend them. But where does all that money go? And how much of it is wasted?

Well, where it goes is no secret, but how much of it does little to benefit us is something we don't really know.

Why not? Because we put so little effort into finding out.

In 2022-23, the federal and state governments spent almost \$890 billion. Nearly 33 per cent of that went on social security payments; 21 per cent on healthcare (hospitals, doctors, medicines); 15 per cent on education (from pre-primary to university); 5 per cent each on defence and law and order; plus transport, the environment, housing, recreation and culture, and much else.

People who resent the taxes they pay like to think it goes to council workers leaning on shovels and public servants sitting around drinking tea, but really, they should be thinking of doctors, nurses and ambos; teachers and lecturers; soldiers, sailors and fliers, coppers, firies and garbos.

Those people are busy almost all the time doing what they're paid to do. If some government departments once were overstaffed, years of cost-cutting should have fixed that.

No, the trouble isn't that workers in the public sector aren't working hard. It's that they can be working away on programs that seem like they should be delivering for taxpayers, but aren't.

Consider these four plausible propositions;

- First, parents are more likely to get their kids to school if threatened with the loss of government payments.
- Second, testing students' literacy is an accurate way to assess their ability.
- Third, early childhood staff have all the skills they need.
- Fourth, a health program designed by both educators and their students will be more likely to discourage risky behaviours.

Sorry, turns out none of those programs worked.

In 2016, researchers discovered that the Northern Territory's efforts to improve school attendance by making welfare payments conditional on getting kids to show up had no effect on attendance.

In Dubbo, other researchers found that if you made a literacy test more culturally relevant by changing a story about lighthouses to one about the dish-shaped telescope in Parkes, you halved the gap between the scores of Indigenous and non-Indigenous kids.

In NSW, researchers found that giving early childhood staff a half-year professional development program boosted the achievement of their kids, especially their literacy.

Yet more researchers — in Brisbane, Perth and Sydney — found that, despite the students' involvement in designing the Health4Life program, it had no effect on alcohol use, smoking, screen time, physical inactivity, poor diet or poor sleep.

---

*“These four careful trials are the exception, not the rule.”*

---

## Forget smaller government, let's shoot for better government

Continued from page 5

What all these research efforts had in common was that they evaluated these programs using RCTs — randomised controlled trials.

This involves using the toss of a coin to divide similar participants in the trial into two groups. One group gets the treatment and the other “control” group doesn't. You then compare the two, confident that any differences between them have been caused by your intervention.

Point is, this is a far more rigorous way of judging whether government spending programs achieve the benefits you were hoping for, rather than just doing a pilot program and deciding whether it seems to have worked.

But these four careful trials are the exception, not the rule.

A study by the Committee for Economic Development of Australia examined a sample of 20 Federal government programs worth more than \$200 billion.

It found that 95% of them hadn't been properly evaluated. The Committee's examination of State and Territory government evaluations reported similar results.

“The problems with evaluation start from the outset of program and policy design,” it said. Across the board, the Committee estimated that fewer than 1.5% of government evaluations use a randomised design.

Similarly, a Productivity Commission report in 2020 into the evaluation of Indigenous programs concluded that “both the quality and usefulness of evaluations of policies and programs ... are lacking”.

“Evaluation is often an afterthought rather than built into design,” it found.

This is in marked contrast to the medical profession, where controlled trials are standard in the evaluation of medical operations. These have demonstrated that



*“Thank God! A panel of experts!”*

the treatments preferred by experts were often worse for patients.

For instance, radical mastectomies for breast cancer disfigured 500,000 women while doing nothing to increase their odds of survival. Many treatments found to be harmful had been supported by expert opinion and low-quality before-and-after studies.

If you can feel a commercial message coming on, you're right.

Dr Andrew Leigh, former economics professor and now Assistant Minister for Treasury and many other bits and bobs, has been championing the use of randomised controlled trials in Government Program Evaluation for years.

And last year the Albanese government set-up within Treasury the Australian Centre for Evaluation, with Leigh responsible.

It aims to expand the quality and quantity of program evaluation in co-operation with other government departments. Its leader, Eleanor Williams, has a modest budget and a staff of more than a dozen.

A key principle is that high-quality evaluation of a program's impact needs to be built into the design of the program from the get-go. The Centre will also collaborate with evaluation researchers outside government.

And now the Paul Ramsay Foundation, Australia's largest charitable foundation, is providing a \$2.1 million round of grants for people to run randomised trials on important social problems.

The Centre, which has been given access to a wealth of “administrative data” — statistical information collected by government departments — will make this available to academics and others receiving grants.

I think this is all to the good. And about time.

Econocrats went for decades supporting the push for smaller government, which led to the privatising of many government-owned businesses (including a national electricity market now dominated by three big companies) and much outsourcing of government services to private businesses — which, as should have been expected, have proved highly efficient at increasing their profits.

Great. What we could use now is a lot more attention to achieving *better* government.

**Ross Gittins, economics editor of the Sydney Morning Herald.**

This article was published in the Sydney Morning Herald on July 12, 2024