

# MACHIAVELLIAN TUNNELLING



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*"Princes who have achieved great things have been those ... who have known how to trick men with their cunning, and who, in the end, have overcome those abiding by honest principles."*

Niccolò Machiavelli, *The Prince*

When the Warnow tunnel concession (see this issue of *World Tunnelling*, p 65 *et seq.*) was awarded, it soon emerged that the traffic forecasts had to be corrected to include user charges. Once that correction had been made, it was clear the project needed substantial public subsidies. The project was in limbo, until the German Ministry of Transport finally bailed it out.

Public-private partnerships will run into difficulties if the roles of public and private investors are not clearly defined from the start. There is an astonishing level of misinformation and deception in the preparation of major construction projects. With my colleagues Nils Bruzelius and Werner Rothengatter, I have surveyed several hundred projects in more than twenty countries, and we have found an unhealthy pattern in operation for large public works: put simply, the 'survival of the unfittest'.

Which projects do get built? Often not the best ones, but those for which proponents – private and public – best succeed in projecting a make-believe proposal. The following appears to be the Machiavellian formula for project approval:

$$(underestimated\ costs) + (overestimated\ revenues) + (undervalued\ environmental\ impacts) + (overvalued\ economic\ development\ effects) = (project\ approval)$$

The Channel tunnel came in 80% over budget with a cost overrun of £2.8 billion and patronage 50-80% under forecast. Immediately Eurotunnel was locked in a debt trap from which it has never escaped. Studies carried out at the University of Kent show that five years after the tunnel's opening there were still few and only small impacts on the wider economy; that it was difficult to identify any major developments associated with the tunnel; and that potential impacts on the directly affected regions were found to be mainly negative.

The story is similar for Denmark's Great Belt tunnel, the second-longest underwater rail tunnel in Europe. A cost overrun of 120% combined with lower-than-expected revenues threw the project into non-viability even before operations began. Cross-subsidies from the Great Belt road bridge saved the tunnel.

Many viable projects do exist – in tunnelling as well as in bridges, dams, stadiums, railways, gas and oil extraction, public buildings etc. – that don't require delusion for their justification. The record shows that even complex architectural treasures like the Bilbao Guggenheim or the Pompidou Centre can be built on time and budget.

The problem is not that good projects don't exist. The problem is that the Machiavellian formula used by many project proponents to promote their favourite project creates a distorted hall-of-mirrors in which it is exceedingly difficult to perceive which proposals should be undertaken and which not. As a consequence, as the Major Projects Association acknowledges, too many projects have proceeded that shouldn't have done. I would like to add that many projects don't proceed that should have, had they not lost out, not necessarily to better projects, but to projects with 'better' delusion, that is 'better' underestimates of costs and overestimates of benefits.

I agree with Lawrence Williams and Maurice Jones in *World Tunnelling* Opinion (November 2002, p 411), that honesty is the best policy and that the tunnelling industry doesn't have much to be afraid of in telling the truth about its projects. Tunnelling is here to stay and the industry should watch over its reputation.

Relying on honesty may not be enough, however. Enron and its successor scandals have shown that one should be sceptical of professionals and officials who promise to regulate themselves. Our study shows that this scepticism must also be applied to those involved in promoting and building large public works projects. Key weapons in the war on deception will be accountability and critical questioning.

Many of the public-private partnerships currently emerging in large construction projects contain more and better financial checks and balances than previous institutional set-ups. This is a step in the right direction but should be no cause for complacency. An experimental attitude is necessary to find more measures that will curb deception and thus limit cost overrun, revenue failures, debt traps and negative environmental and social impacts. The professional expertise of engineers, economists, planners and administrators is indispensable to building the infrastructures that make society work. But sometimes the professions work in too close a collaboration with Machiavelli, and we need measures of accountability to curb this. Not only for the good of the taxpayer, but for the good of the construction industry as a whole.