

The UK Covid-19 Vaccine Task Force A case study of government success

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1. Introduction

We talk of processes being ‘engineered’, e.g. ‘business re-engineering’. This does not mean that the work is carried out by engineers but it does imply the use of processes that are most likely to achieve success. Figure 1 shows some of the features of an engineered process. I demonstrate here the use of these features by a government task force

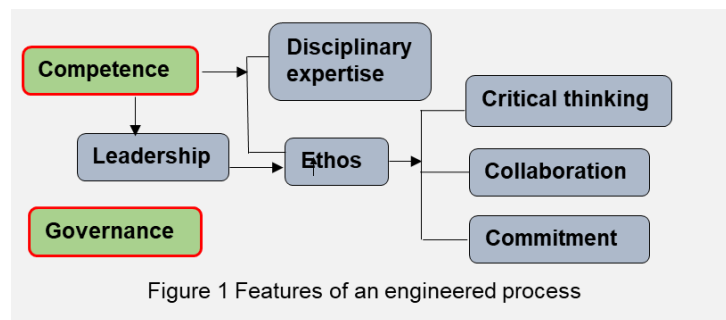


Figure 1 Features of an engineered process

2. The UK vaccine task force

At the time of writing (February 2021) it is clear that, on the basis of deaths per head of population and effect on the economy, the UK government response to the Covid-19 pandemic has been very poor compared with other nations. However, based on the rate of vaccinations, the UK is doing very well in comparison with other nations. What makes the difference? The Government appointed a Vaccine Task Force (VTF) that masterminded the roll-out. Here is a list of quotes from an [article](#) in The Times that illustrate relationships between the way it operated and the features of Figure 1:

1. “Quickly Netty England fired off an email to contacts at businesses — including Oxford Biomedica, Cobra Biologics and Fujifilm — which she knew had vaccine-manufacturing capability and expertise.” *Competence*
2. “By Monday evening we had a consortium which was made up of companies that, in normal times, would be competitors,” she said. “We had them all working together.” *Collaboration*
3. “The task force pulled in industry and scientific experts to expedite the search for the vaccines that would cut the death toll and lead society back to some kind of normality.” *Competence*
4. “The unit’s success can be attributed in large part to the fact it was run by a small, tight-knit group of people who knew each other, knew what they wanted and knew how to go about getting it.” *Competence, collaboration*
5. “The task force chairwoman was Kate Bingham, 55, a biochemist turned venture capitalist who has spent decades delivering the investment that turns research into new life-saving drugs.” *Leadership*
6. “Clive Dix and Kate Bingham challenged the status quo — they showed how to make decisions at speed and at risk within the public sector framework.” *Leadership*

7. "They said let's talk again on Saturday and the Novavax people nearly fell off their chairs," said an official. "In their experience no one in any government anywhere in the world had ever offered to meet on a Saturday." *Commitment*
8. "...the task force whittled down a shortlist of 23 potential vaccines to the handful they judged would work safely and be ready first. *Critical thinking*
9. "'Officials were saying 'the minister likes the look of Moderna' but the task force was adamant that Biontech would be ready first — they were right,'" said an adviser." *Governance*
10. "Insiders say much credit in navigating the contract talks is due to Madelaine McTernan, 45, a former City lawyer seconded to the task force from UK Government Investments." *Competence*
11. "One industry secondee who has now left the task force said the return to business as usual was inevitable: "How long can you keep having an external group sitting in BEIS but with huge autonomy and direct access to the top? *Governance*
12. "The military "can do" approach was reinforced by..." *Ethos*

As far as I know, no member of the task force was a qualified engineer but they did adopt an engineered approach to achieving their goals.

3. Features of engineered processes

The features of Figure 1 represent a limited set of those used in engineered processes but I believe that they are crucial to success in situations of complex uncertainty.

Competence

Disciplinary expertise is the ability to carry out specific tasks. See quotes 1,4,7 and 10.

When you have a difficult problem to solve, having people who 'know where to put the chalk mark' (see box) is of great advantage.

A task force needs people with deep competence within its ranks and must call others in as advisers when needed. Ability to identify top experts is an important issue that depends on networking (not listed in Figure 1 but evident from the article).

A task force needs breadth of disciplinary competence - the VTF had specialists in vaccines, manufacturing, law, etc.

Ethos is about the principles that guide actions, the culture under which the organisation operates. It is of extreme importance when working with complex uncertainty.

Critical thinking is the core issue in ethos. It should be viewed as a [discipline](#) for those who seek to address complex uncertainty. A critical thinker is a person who is constantly looking for and adopting principles that will lead towards successful outcomes. The members of a task force must be critical thinkers. Principles used by critical thinkers include:

- a. Always challenge and test proposed solutions; expect your ideas to be challenged; seek to have your ideas challenged and be prepared to change your mind. Suggestions for making improvements from all persons involved in the enterprise should be welcomed rather than

Where to make the chalk mark

An American manufacturer had a chief engineer who was retired early because he did not have much work to do. Their machinery broke down and no one could identify the fault. The chief engineer was asked to advise. He put a chalk mark on a gearbox and said "Replace that" This was done and the machinery ran smoothly again. The engineer submitted a bill for \$50,000 dollars. The firm responded "Fifty thousand dollars for making a chalk mark!" The engineer then submitted a new bill: "For cost of chalk: 50 cents; for knowing where to mark it: \$49,999.50"

being strongly resisted as often happens. Quote 8 illustrates the use of option analysis that is the basic strategy in solution testing.

- b. Treat failures as learning opportunities. An engineered process is focused on eliminating faults but when innovating, mistakes are to be expected. They need to be actively identified and eliminated.
- c. Look at past successes for ideas for improvement but do not assume that what worked in the past in a similar context will necessarily work in the current context.
- d. Adopt a constant drive to improve processes.
- e. Adopt a positive approach to the control of risk
- f. Work to an engineered plan, i.e. to a plan that adopts the features of Figure 1

Collaboration Quote 2 illustrates the importance of collaboration. Deep collaboration within a task force, and with all contributing parties, is essential.

Commitment While advice needs to be sought widely, it is important that those who make proposals are disinterested in the outcomes i.e. that they are not influenced by consideration of personal advantage (see box). Commitment to the goals of a project by the core team is dependent on such ethos. Quote 7 gives another example of commitment.

The 1926 UK Electricity Act required that 'Electricity Commissioners', who formed a task force to transform the way electricity was produced and delivered, could not own any investments in the companies involved. This was a very important clause in the Act because, when making proposals for action, it is very difficult for people to put aside considerations that may affect their livelihoods.

Leadership

Quotes 5 and 6 show the importance of leadership. Figure 1 shows ethos as an attribute of competence but also as an attribute of leadership. Leaders must ensure that the ethos of the team is appropriate to the context and that all involved adopt it. This is of paramount importance in the success of any organisation.

Governance

"The system by which entities are directed and controlled".

The body that is delegated to carry out the work needs to have an appropriate level of authority to achieve its goals. Clients should allow them get on with their work and not micromanage them - but must monitor performance and take action if the performance is inadequate. The client must act in collaboration with the body in seeking to achieve the goals. The client for the VTF consisted of government ministers. In Quote 9, it is noted that a minister had his own idea about which vaccine should be used. He had the authority to over-rule the proposal from the VTF but wisely accepted their recommendation. Clients may require proposals from a delegated body to be reconsidered but should never over-rule them with untested solutions.

The relationship between the client and those to whom it delegates responsibility is often a critical issue in engineered processes.

4. Government policy

The VTF used engineered processes to create a world leading vaccination programme. This demonstrates the order of magnitude improvement that the use of such processes can deliver. The Government must take advantage of this experience to seek to engineer all its actions.