

"The further back we look the further forward we can see." — Winston Churchill

Most businesses think they are complex. Some businesses really *are* complex. But few are truly more complex than pharmaceuticals, in which scientific, technical, economic, ethical and political issues are intertwined.

Developing new drugs is not for the faint-hearted. Getting a drug to market typically takes 15 years and is very expensive. Costs vary, but a good estimate is \$800 million.¹ The probability of a potential medicine progressing from the first human administration through to a licensed medicine available to doctors and patients is less than 1 in 20, although results vary significantly between therapies.²

Over the past decade the industry has dealt with these risks by extensive consolidation, driven by business economics to exploit economies of scale and scope. Scale gives an investment tolerance to cope with the risks inherent in uncertainty and to bring to bear the expertise and technology needed to deal with complexity. Scope allows companies to access diverse technology and intellectual capacity to apply to R&D challenges. Clearly the size of a company enables it to survive a certain degree of project failure, but it is in the exploitation of scope — that is, sharing the breadth of company activities and skill — that further risks may be mitigated.

The benefits of sharing and exploiting cutting-edge science, technology and expertise are obvious. But doing so has its own side-effects. Enabling sharing across geographies, R&D

Taking Command

Could a 19th century Prussian general's approach to the battlefield simplify organizational complexity in the pharmaceutical industry? Stephen Bungay, David Roblin and David Slavin explain how applying the principles of 'mission command' could provide the key to a smooth-running operation.



portfolios, disciplines and therapy areas has required more matrix working. The result is a rise in complexity of a different kind: organizational complexity.

The biotech companies have taken a different route, trading scale for agility. Through the lengthy process of drug development, these companies are encouraged through their short-term funding cycle to add incremental knowledge to a potential new medicine and thereby 'de-risk' it in order to justify new funding. This creates a tight focus on what the next experiment brings, and is an approach that seems to be entering the thinking of large pharma.

But the limits of the biotech approach bring home the importance of scale. The costs of late development and launch invariably mean these companies require large pharma support through licensing deals to get new medicines licensed and available to patients.

The search is on, then, for a third way, which combines scale with agility.

Facing up to friction

The effects of a combination of high complexity and high uncertainty have been recognized before. The recognition came a long time ago, in the early 19th century, and it was seen on the battlefield. The man who examined it was the Prussian General Carl von Clausewitz and he conceptualized it under the name of 'friction.'

Friction, Clausewitz wrote, is what distinguishes real war from war on paper.³ It makes the simple difficult and the difficult impossible. He gives many examples, but they all come down to lack of knowledge and the fact that an organization consists of many people with their own independent wills. The nature of friction is shown visually in Figure 1.

As the figure shows, 'lack of knowledge' is a combination of uncertainty caused by deficits in the information we have

(which is either not there, not clear or obscured by noise) and by the fundamentally unpredictable nature of the environment, in which there are chance events and even one's own actions have unintended consequences.

Because we all have 'independent wills,' we process the information we do have in different ways: it is imperfectly transmitted, misunderstood and subject to different interpretations. We also all have our own agendas: even if information is understood as intended, people have different interests and goals and may resist what does not suit them.

Mission command

The modern military have had to confront these realities for a lot longer than business has. They have slowly developed a way of dealing with it, which has evolved over 150 years. They call it 'mission command.'

The two core demands of mission command are to establish a high level of alignment by being very clear about the 'what' and the 'why,' and to grant a high measure of decision-making authority to relatively low levels of the organization who are dealing with the question of 'how.' Rather than following detailed orders, an officer's responsibility is to understand his commander's intention and to take whatever action he deems necessary to fulfil it. If the situation changes — as it is expected to — the guide to decision making is the original intent.

This can be understood as a form of what we would today call 'empowerment.' It involves creating space for decision making by giving power to those who need it, and not allowing it to be withheld by those who do not. Decision levels should be set as low as possible. This also reduces the need for all but essential information to be passed up and down the chain of command, ensuring that decisions are taken by the competent individual with the most up-to-date information.

The combination of aligning everyone about 'what' and 'why' and pushing down decision-making results in an organization that can adapt rapidly in the face of uncertainty while retaining cohesion.

Applying mission command to pharma

At Pfizer, we have realized that mission command is an approach that could be used to deal with complexity and uncertainty. Mission command developed not as a theory but as a set of practices, and has been tried and tested in the most arduous conditions over many decades. Originating in Prussia, it has crossed national and cultural borders, and it developed from the first as an operating model for organizations of hundreds of thousands. It is also fundamentally scalable: the need is clear and a solution is on offer.

Mission command is so called because it involves the assignment of a mission or task, rather than a set of instructions, to a subordinate. The subordinate then analyses the mission, having been provided with a framework of understanding or context and the support/resources needed to succeed. The mission is broken down into its constituent tasks and these become missions for the next level. At every level people are clear about the context of what they are trying to

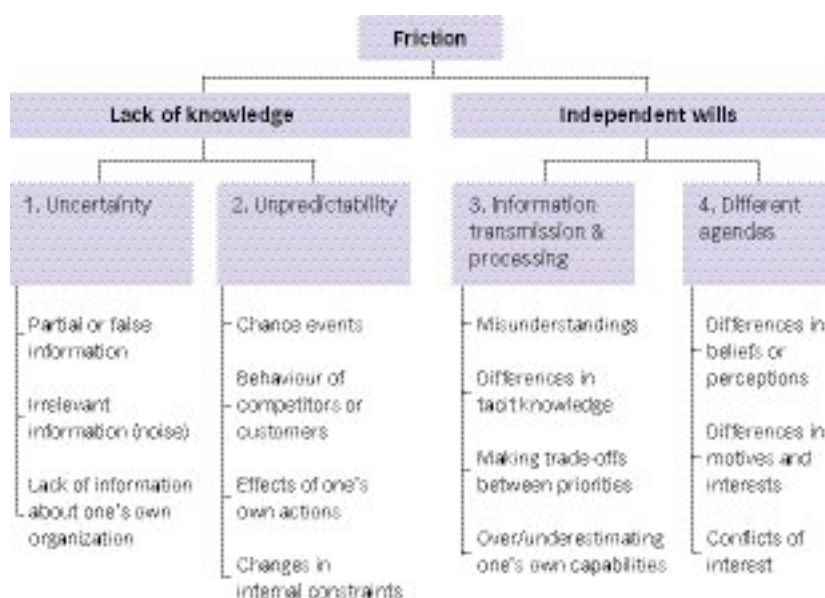


Figure 1: The concept of friction.

achieve and why it matters — and have the power to adjust what they actually do as they proceed. It is a form of directed, purposive improvisation.

Figure 2 lays out the distinctive features of mission command onto the circle we all go through in moving from planning to actions to outcomes. In doing so we all encounter friction — the features of mission command are to address friction at each step. A good situation analysis identifies the essential factors of the opportunity, the environment and the competition and defines the 'end-state' we are seeking to achieve in terms of desired outcomes rather than mandated actions. What the organization has to achieve is formulated not as a detailed plan, but as a broad statement of intent, which leaves room for the organization to adapt as it goes. This high-level intent is broken down into missions to give focus to each individual's actions.

As they cascade down, low-level actions are linked with intent two levels up, all the way through and across the organization. There is a collective 'backbrief' at each stage, in which those who have been given a mission repeat it back up and explain its implications in terms of the tasks they will seek to accomplish in order to achieve it. This eliminates misunderstandings and ensures clarity and alignment.

Differences in motives and beliefs cannot be eliminated, but they can be exposed. Making the key constraints explicit ensures that people know how much decision-making and action-taking space they have. As metrics are driven off the mission, rather than being independent of it, there is a better chance that they will pick up the information which matters. As it is the mission which really matters, the metrics can be adjusted if they are failing. Finally, everyone is free to adjust and change their action in line with intent if the desired outcomes are not being achieved. This hurdle for changing actions at lower levels is low and small adjustments will be constant, so you do not have to change the whole plan at the first unexpected event.

The plan now becomes a framework for defining actions, which are adjusted to achieve desired outcomes. In essence,

mission command links actions directly to desired outcomes. In this it is radical. Success results in commitment to achieving the desired outcomes based on the resources and constraints available and most importantly of all, adapting actions in line with environmental changes.

For those bold enough to apply it, the mission command approach has proved to be the most appropriate way to contend with the demands, uncertainties, and frictions of war. It has a growing provenance in business. It requires the development of trust and mutual understanding between leaders and followers both up and down and across the organization. It requires initiative at all levels. It is the key to succeeding in the decision-action cycle.

Administering mission command

Like the human body, an organization is a complex adaptive system. Everything in it is related to everything else. Chains of causality are not linear. Picking the right point of leverage in the organization was similar to designing a treatment for a patient with a variety of symptoms. We had a treatment but had to decide upon the route of administration and dosage level.

We decided to administer mission command locally because we did not know all its effects. Administering it generally would have taken a long time and risked rejection. We chose to administer it to select project teams in full development because they were where the potential leverage was greatest, being the point where strategy and operations meet. They represent the main axis of value creation.

The 'dosage' level we decided on was a set of two to three day workshops run by a small team which specializes in introducing mission command to business. The workshops spent one day on teamwork and behaviour, and one and a half days on analysing the teams' mission. The initial pilot was run with two teams whose leaders were keen to try it out.

Outcomes

Early indications are that applying the principles of mission command in the pharmaceutical business is both safe and effective. The teams involved both responded very positively, and have reported far higher internal alignment and engagement with their projects. Clarifying their mission proved to be surprisingly valuable, resulting in what one project leader called "a real sense of clarity about what we needed to deliver and why." Internal structures have been simplified, meetings have been streamlined and levels of accountability have increased.

People are beginning to believe that they really are empowered to take decisions and are therefore starting to take them. One of the teams achieved a filing deadline, which at the beginning of the year was regarded as a forlorn hope with no more than a 10% chance of success. Another has taken a full three months out of its timeline.

The methodology also appears to be safe. It can be integrated with our existing planning systems without causing disruption and does not involve costly new systems. The metrics the teams use to track their missions can be derived from our balanced scorecard. People are not abusing their

Figure 2: Features of 'mission command' that address friction.



freedom or running wild. One side-effect of the increased focus on the main effort of getting drugs to patients has meant that commitments to internal projects have suffered, and time allocation decisions have been more in favour of the project teams. However, the business has showed no signs of suffering as a result.

This initial treatment has highlighted the need to adjust and re-align the environment in which teams operate. There are implications for goal setting, performance management, budget responsibility, governance and approval processes — indeed our whole operating model. We can address these issues as we go, and have already started to do so. Mission command is increasingly setting our agenda.

As a next step we are running more teams through the workshops and have now launched an empowerment code which legitimizes the principles of mission command throughout our Sandwich, UK, site.

We have realized that this is not just about running some team-building workshops, but about changing our operating model and aspects of our culture. The one certainty about that is that it will take a long time. But then we are used to that. We are not certain what the operating model will look like, or how the culture will develop, but we do know what the main principles behind both of them are. The rest is uncertain. But then, we are used to that too.

We are looking forward to the journey. ●

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