CASE STUDY

Crafting sense at ChemTech

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This case allows the reader to consider if and how conventional approaches to strategy making may limit the degree to which firms prepare for uncertainty and change. It shows ChemTech,[1] a leading specialty chemicals company supplying the flavours and fragrances industry, wrestling with conservatism in its strategy-making processes, and adopting an innovative approach – 'crafting sense' – that aims to cultivate overall firm readiness to deal with emergent change.

The challenge from above

It was two months before the 'Global Strategy Rollout' for ChemTech and corporate top management were not happy. 'The new divisional strategies are too similar to the ones from the previous planning cycle', the top corporate strategy officer observed. More importantly, he noted, the plans didn't address the quickening pace of change in their industry, or even the obvious changes in the business environment in the intervening years. How, he wondered, could he help divisional management recognise that their individual plans were out of sync with a rapidly changing business environment, and in need of vigorous new directions? And how could he encourage them to see their strategies not as a trajectory they were locked into, but rather as a resource permitting adaptive action when the unforeseeable occurred?

ChemTech – a mid-sized specialty chemicals firm with a worldwide workforce of approximately 4,000 – was experiencing a problem typical of the growing number of organisations facing disruptive change in the business environment. It was striving to balance the disciplining effects of planning against the need for innovative, adaptive action. For ChemTech, like most organisations, the dilemma of planning vs. adaptability was deeply problematic, but finding a way of reconciling these seemingly opposed demands was crucial for the firm's long-term success. How could corporate management help the divisions work towards finding such a way?

Controlling the details of implementation

Formal strategic planning was a relatively new phenomenon at ChemTech. In the words of one of the senior managers,

> there really wasn't any formal strategy at ChemTech until about five years ago. Up to that point we simply made money by producing high-quality, desirable products for an industry that was organised like a sort of big club in which everyone had a place and a role.

This cosy situation had changed when corporate management decided that a more formal planning process was needed, and instituted a tri-yearly process of developing strategic plans for the different divisions of the corporation. The first of these tri-yearly strategy-making cycles, undertaken in 1999, was internally referred to as the 'X3'

[1] The name is fictitious, but the company, its situation, and our experience with it are real.

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Exhibit 1 Imagination Lab Foundation philosophy

Imagination Lab is a Swiss-based, non-profit research foundation that develops and diffuses ideas about innovative strategic management practice. We see a business world in which routine, inefficient communication and a lack of coherence are only the symptoms of a deeper problem: that people in organisations struggle to create meaning and deal with the unexpected.

For more details see www.imagilab.org.

strategies. Because each of the three divisions had a different market focus, they were allowed some autonomy in developing these X3 strategies. However, all had used commonly accepted strategy-making tools in their efforts during the X3 cycle of strategy development.

The Fragrances division had reviewed a variety of financial performance indicators (prior revenue, costs, projected sales) from their many clients, segmenting their client base into various grades, and especially identifying 'preferred clients, who represented more than 70 per cent of the potential' revenue stream. This analysis had led them to conclude that clients who fell into this segment would provide the best 'forward cumulative EVA' for their stakeholders. Intensified R&D (more staff, increased budget), and a new HR initiative for hiring and retraining staff to align their workforce with organisational performance targets, supported the strategic focus on these 'preferred clients'.

The Flavors division had reviewed similar financial performance indicators, but had supplemented this analysis with a detailed market segmentation study. This study identified specific sub-industries, and for each of these had calculated overall market size, average client size, and projected growth potential. Because their market was highly fragmented (the two largest players together, both globally recognised organisations, accounted for only 4 per cent of total market sales), the emphasis in the Flavors division analysis was more on projected growth rates in different sub-segments rather than on ideal clients in them. The Flavors division had therefore concluded that their strategy would consist of concentrating on these high projected growth rate sub-segments in order to achieve the returns that their corporate parent expected of them.

As with its other two sibling divisions in ChemTech, the Specialty Chemicals division had also completed a comprehensive financial review of its performance. Specific targets for its contribution to the corporate bottom line had been set, but its strategic situation was especially complex. For historical reasons, this division had evolved to serve both internal and external clients. It provided basic components to the Fragrances and the Flavors divisions, as well as to external organisations which were often the direct competitors of these sibling divisions. The ability to judge the financial trade-offs (both year-on-year as well as in terms of more extended time horizons) involved in straddling internal and external markets had become compromised by the growing size of the organisation, as well as by accelerating changes in alliances among competitors. A decision had therefore been taken to manage this complex situation with the 'Balanced Scorecard' approach. The leadership hoped that this could help neutralise any tendency to develop a bias towards either the internal or external clients that might not serve ChemTech's overall long-term interests.

By early 2002, the second of the tri-yearly cycles of strategy development was just nearing completion. The resulting strategic plans, called the 'X6' strategies, had not departed in any radical way from the previous ones (see Exhibit 2 below).

In fact, many in the firm had felt that, if the X3 strategies had suffered any deficiency, it had not been in the analysis but in the way the strategy had been used. Thus, interviews with executives and management in early 2002 were very consistent across all divisions in emphasising that the strategic planning groups were concerned with controlling the details of how the new X6 strategy would be implemented. One senior manager said:

Exhibit 2 Summary of situation in ChemTech

Division	Market	Standing in 'ChemTech'	X3 Strategy	X6 Strategy	Means of dissemination
Fragrances	Perfumes	Oldest division of corporation, very high profile	'Preferred client', determined via financial measurements	Review and update X3	PowerPoint slides of financial graphs, mission and objectives statements, specific actions to be taken
Flavors	Foods	Newest division, 'problem child'	Detailed market segment analysis	Review and update X3 with more detailed analysis	PowerPoint slides of financial graphs, mission and objectives statements, specific actions to be taken
Specialty Chemicals	Chemicals	Basic engineering, corporate-wide logistics and budgeting	Market analysis, begin Balanced Scorecard approach	Extend Balanced Scorecard	PowerPoint slides of Balanced Scorecard components

> The strategic vision of X3 was not lived through people. People were reassured that we had such a plan, but it wasn't critical to what they did on a daily basis. We now want to bring it closer, bring it home to people, and make it tangible in their behaviour.

A senior member of another strategy development team put it this way: 'The X3 didn't address implementation. In fact, we had success with the strategy despite the lack of implementation focus.' And, in the words of the number two executive in the largest division, 'The Balanced Scorecard is the primary input to our strategy. It drives the level of detail about what has to be done down very far – it's a very detailed process.'

But there were clearly dissenting voices who argued that strategy development had quickly become routinised and bureaucratic, and that the obsession with controlling the details of implementation carried with it diminishing returns. A senior Vice President at the division using the Balanced Scorecard approach observed, 'it's a heavy process. There's so much formalism that it is quite difficult to use.' And, although they were in the minority, there were some divisional managers who shared the top corporate strategy officer's corporate impression that the X6 strategies were 'too similar to the X3 ones'. After talking about the review of the competition they had conducted to develop their X6 plan, the senior strategist in one division had declared, 'Porter would be proud of us'.[1] A senior colleague from another division had promptly rejoined, '. . . and the way we've gone about it is ridiculous'.

Crafting sense[2]: combining thinking and manual skills

From a vantage point overseeing all corporate-wide strategy development, the corporate strategy officer at ChemTech had recognised that the divisional processes had stagnated, and he began to challenge the *content* of the divisions' strategic plans. One way to remedy the situation, he believed, called for a parallel *process* that might yield

[1] The individual was referring to the prescriptions on strategy found in *Competitive Strategy* by M. Porter (1980: Free Press).

[2] See the forthcoming book on crafting sense by Johan Roos and Peter Bürgi.

Exhibit 3 The crafting sense approach

Combining established principles from psychology and education, the basic idea of the crafting sense approach is to combine people's thinking and manual skills and use this capacity to interpret, deal with, and communicate business issues. When applied to complex business issues, like strategy making or innovation, this approach creates the conditions for deep comprehension, strong commitment, and improved communications. Making sense by crafting sense can be an immersive, emotional and gratifying activity, which enables managers to learn, interact, and relate to one another in new ways.

See J. Roos, 'Sparting strategic imagination', *Sloan Management Review*, Fall 2004 (forthcoming).

Exhibit 4 Different assumptions in strategy-making

Existing approach already used by each division	Crafting Sense approach
• Begin by analysing the external world	• Begin by understanding your organisation
• One can make decisions about the future	• The future is unpredictable and change is a fundamental condition of life
• One should control the details of implementation	• Groups at every level of an organisation have to interpret strategy
• Strategy making as a process should be routine and systematic	• Human social interactions often produce novel, emergent situations and forces
• Strategy is impersonal, emotionless and non-committal	• Encourage groups to discover and 'embody' good strategic behaviour

additional, complementary content. To this end corporate management asked Imagination Lab Foundation to design and stage workshops for the strategists and senior managers of each of the three divisions. In line with the Imagination Lab philosophy these workshops applied an approach that combines peoples' thinking and manual skills: crafting sense (see Exhibit 3). When crafting sense, people physically construct a representation of the issue at hand (use of kinesthetic information), which is seen and visualised (use of visual information), as well as verbally enriched and evaluated (use of narrative information).

To help these managers to 'craft sense', Imagination Lab facilitators selected and applied a workshop product in which managers use a variety of LEGO materials in many colours, sizes and shapes as a communication tool.[2]

The strategy workshops

Instead of emphasising the future, the facilitators designed the workshops to focus on their organisation's current strategic situation (see Exhibit 4).

The workshops designed by Imagination Lab were all similarly structured in three basic phases: (1) looking inside, (2) looking outside, and (3)

[2] For the conceptual background of this technique see J. Roos, B. Victor and M. Statler, 'Playing seriously with strategy', *Long Range Planning*, forthcoming, December 2004.

Exhibit 5 Workshop structure

Looking inside
The first phase of the workshop focused on organisational identity. Participants were asked to use the 3D materials to construct individual representations of the organisation's identity – not its physical facilities, but its essential characteristics, key functions, internal relationships, structures, most prominent features, central attributes, etc. After each person had discussed the representation they had built with the other members, the group was asked to work together and collectively build a single, joint version of the organisation's identity. When finished, it was placed in the middle of the worktable.

Looking outside
The second phase focused on the business world outside of the organisation. Each participant was asked to use the 3D materials to build representations of the most important factors that had an impact on the success of the business (whether positively or negatively, directly or indirectly), including clients, regulatory bodies, competitors, new technologies, etc. After each person had discussed what they had built, the group chose which elements to place around the model of the organisation, and where and how to place it. Each placement showed how that element related to the enterprise – supporting it, obstructing it, enabling it, etc. Once this was completed, participants were asked to use the 3D materials to build connections among all the elements on the table, to show the most important influences, networks, and interactions among them.

Identifying guiding principles for action
The final phase of the workshop focused on how to best respond to the changing dynamics between the inside and outside worlds. In this phase participants were asked to identify a series of likely future events that could affect the organisation. They then systematically discussed the implications of each event for the organisation, including what they thought the 'best' response for the organisation should be in each scenario. Facilitators helped the participants then identify patterns in these responses, and consolidate these into succinct ideas or phrases. These ideas then became 'guiding principles' which provided direction for the group's strategic action.

identifying guiding principles for action. These were explained to ChemTech as shown in Exhibit 5.

Emerging content

Each of the crafting sense workshops stimulated interesting and unexpected ideas, which, in turn, yielded new inputs to the strategy-making process.

Fragrances division

The construction of a collective identity for this division focused on a conceptualisation of the organisation's workflow. The structure the group built was very linear, and was laid out along a single long axis, which began in an 'innovation engine' and culminated in a set of stairs which rose up to a 'client project', represented by a large animal. A small, mobile, piloted vehicle, bristling with emblems of the specialty products that this division provided to clients, was moving along the axis. It represented the continuous efforts to bring value to clients, and when it was produced, the participants united in seeing their organisation in these common terms.

In the next phase of the workshop, the key element that attracted most attention was the building of a large 'windmill' or 'propeller' representing the 'winds of change' which were sweeping across the industry, and which were likely to change things in the near future. This was by far the largest and most imposing construction on the table, and it occasioned considerable discussion about how much the current X6 strategy reflected these forces of change in the organisation's environment.

Finally, the workshop generated several key guiding principles. '*Create love stories with clients*.' '*Take advantage of industry consolidation*.' '*Know ourselves intimately*.' The first two of these ideas sprang directly from the way in which the group had imagined the identity of the organisation – namely as a process which had to be well controlled (hence the need to '*know ourselves intimately*'), and which was focused entirely on the delivery of products that delighted their customers (hence the need to '*create love stories with clients*'). Most importantly, these guiding principles were expressions of ideas absent from the X6 strategy document, which had focused entirely on a variety of financial metrics and analyses as support for the 'preferred client' strategy. In light of the guiding principle to '*take advantage of industry consolidation*', one participant stated 'the group is going to have to update the X6 plan to take into account some of these likely competitive challenges'.

In the final discussions, the group became acutely aware of omissions in the X6 plan. With their Corporate Vice President sitting at the head of the table, one of those who had worked to draft the plan stated bluntly: 'The X6 strategy should be anticipating and reacting to the winds of change, but all we've really put into that plan is how to take care of today's business.' Another person said: 'If you look at the X6 plan, where is the "love" part? Where is the emotional part that is such a big part of our products? It's not there.' And a third person, reflecting on the vivid representation of the organisation in its complex competitive landscape, said: 'One of the things that's clear to me is why all the two-dimensional ways of communicating strategy, like charts and laptop slide shows, just don't work. To really understand what our strategy should be, you have to experience it like this, in 3-D.'

When the divisional strategy finally rolled out later that year, the basic structure of a 'preferred client strategy' remained in place, but it was supplemented in two important ways. First, the strategists had concluded that they would have to adopt a new perspective towards their strategic plan: no longer seeing it as a predetermined set of activities, they would regard it as a key point of reference which left them with enough tactical room to take advantage of opportunities where they presented themselves, or where they needed to adjust to the 'winds of change'. Second, they condensed the guiding principles into three catchphrases – 'I ♥ fragrances'; 'I ♥ my clients'; and 'I ♥ to win together' – that were used to convey the core ideas of the division's strategy to all employees.

Flavors division

The construction of a collective identity for this division was very difficult, as several different attempts to create a simplified version of the key characteristics of the organisation were rejected as '*too simplistic*'. Ultimately, participants built a detailed miniature showing the three major internal segments of the division, with a variety of elements added to each section to symbolise the differences in their components, personnel, strengths, weaknesses, techniques, etc. Behind this threefold external face of the organisation participants built a narrow set of communication channels to the very small support departments overloaded with information requests. Thus, participants 'saw' their organisation as a broad, flat, diversified external surface dependent on insufficient internal support.

The simple guiding principles drafted by this group focused on what they called the 'tubes', which were those few, highly valuable links that connected them to their clients. Their actions, they stated, should be guided by the two ideas: '*Build more tubes*' and '*Build the tubes right through the organisation*'. Both of these simple guiding principles bear directly on the insight that success lay in proliferating these 'tubes'. In assessing their own X6 strategic plan, they determined that it simply reflected the complexity of their own internal structure, rather than identifying ways of being successful. 'We've just underlined where the bottlenecks are in our value creation,' said one participant, adding,

> The whole thing [X6 plan] gets even more complicated when you look at the various feedback links. In fact, bad structures only get worse when you link them up. The problem with all these links is that they don't tell you how to act.

At the end of the workshop, the only Vice President among the group, who reported directly to the Division President, spontaneously left the room and ran up two floors in the building looking for his boss. In five minutes he was back, accompanied by this individual, and by the Corporate Vice President for Strategy for all of ChemTech. He drew them over to representation to explain to them what the group had built, and to relate it to what they now saw as the inadequacies of the division's strategic plan.

In an e-mail received several weeks later from the Vice President responsible for strategy, he said that he had reviewed the new sense of strategic purpose with both the top Corporate Strategist and his divisional President 'with positive results'. This became clearer, two months later, when the division announced a strategic reorganisation. Its express purpose was to build more of the 'tube relationships' with clients throughout the organisation, and also make these relationships flexible enough to permit adaptive action when client needs shifted. The division, thus, had been shaken out of their 'analysis paralysis', and were taking purposeful steps to be an effective solutions provider to their complex market.

Specialty Chemicals division

After an initial attempt to create a very orderly depiction of the organisation merged with elements of its context, a discussion among participants in this group focused on several problematic internal relationships. Returning to the model, they converged on the image of a 'flat information surface' in which an interwoven network of relationships knitted together production, marketing and planning, with an emphasis on the quality of the links. The manager who oversaw the entire engineering function was especially emphatic about indicating blockages in the links between people, insisting 'We have to show how it really is.' The final version showed that the Number 2 man in the division was connected, it seemed, to everything and everyone. The Division President, by contrast, noted that while he himself was an active and mobile supervisory component on the 'information surface', he 'wasn't really connected to anything' except the computerised data system of the organisation.

The landscape in which this 'flat information surface' was located became populated by a very wide variety of external elements, representing not only competitors and joint ventures, production sites and outsourced production sites, but also several regulatory agencies and university research alliances. The participants were especially interested in how the Vice President of Purchasing showed distinctions among the several competitors, represented by 'pussy-cats, grumpy bear, and devious snakes'. 'I really like how the competitors are shown as different species of animals,' one of his colleagues said; 'it clearly shows how and why they're different.'

This group too was struck by the fact that populating the Balanced Scorecard model had led them to neglect several crucial strategic implications of their organisational setting. In the final discussions, the idea surfaced that there were actually highly important effects for all the divisions of ChemTech which could not be excluded from the discussion of their own division as a result. The simple guiding principle '*Understand impacts on the whole group*' emerged. And, reflecting on their organisational identity as a complex interpersonal and informational network, they also stated '*Don't depend on single individuals*'. Finally, in recognition of the need to keep the external web of relationships they had with their industry intact, they agreed to '*Maintain trusting relationships*'.

In closing the workshop, the Corporate Vice President in charge of the division commented to the group:

> I'm really glad I didn't send out the memo I've been working on about the 'state of the division'. I've got to redo it completely in light of what we've now learned about the way we all work together.

Another participant added, 'It's surprising that when you work on seeing how you see yourself, you don't have to put so much effort into wondering what the future will be.' The person sitting next to him nodded, and commented, 'When you heed all the things surrounding you, the ideas just seem to come.' Hoping to frame subsequent conversations with colleagues and subordinates around the model they had just built, they carefully packed it away in large boxes in order to be able to reconstruct it later on. During subsequent meetings between this top management team and their several dozen direct reports, this reconstructed model served as the basis for how the entire strategic situation of the division was discussed.

Exhibit 6 summarises what Imagination Lab identified as the key insights and conclusions from the three crafting sense workshops.

Sources

Bürgi, P. and J. Roos, 'Images of strategy', *European Management Journal*, vol. 21, no. 1, 2003, pp. 69–78. Bürgi, P., C. Jacobs, and J. Roos, 'From metaphor to practice in the crafting of strategy', *Journal of Management Inquiry* (forthcoming). Roos, J., B. Victor, and M. Statler, 'Playing seriously with strategy', *Long Range Planning*, forthcoming, December 2004. Roos, J. 'Sporting strategic imagination', *Sloan Management Review*, Fall 2004, forthcoming.

Exhibit 6 Summary of workshop outcomes

Division	Key insight of workshop	Outcome and impact on strategic plan
Fragrances	We have a great process, but we're not prepared to respond to the inevitable 'winds of change'.	Use the strategic plan as a point of reference, and leave room to adjust where needed; cascade strategy with simple ideas rather than numbers.
Flavors	Our plan and structure are simply reflecting the market's complexity, not creating distinctive value in it.	Supplement the strategic plan by identifying and supporting key relationships in our complex market, rather than trying to be all things to all segments of it.
Specialty Chemicals	Our role in the centre of corporation means that we are intensely interdependent with all parts of it.	Focus more on inter-divisional relationships as a counterbalance to the Balanced Scorecard approach.