

The transition from scientist to business manager in a biotech/ drug discovery start-up

The move from a successful scientific career into senior management of a high technology start-up company frequently presents a paradigm shift for the individual in the way that they must manage both themselves and their team. This article aims to provoke and challenge such individuals to consider such paradigm shifts in the context of three areas: building and leading the team, cultural awareness and customer orientation.

By Dr Paul Charlton

You only have to switch on the evening news or read the financial section of the newspaper to see that life as a CEO in a high-technology company, indeed any company, is currently a high-risk, low career life expectancy occupation – and this is true even for the experienced ‘big-guns’ of corporate America.

The challenge is compounded for a scientific orientated management team of a biotechnology/ drug discovery start-up, walking the tight-rope of satisfying the needs of bankers and investors while keeping the technological dream, and the embryonic team, alive and satisfied.

The greatest irony is that for the scientist making the transition to a senior business manager, exactly the skills and experience that lead to such an outstanding academic career can paradoxically hinder entrepreneurial success. It is with this challenge in mind, that this provocative article is intended to address with a particular focus on building a management team, the corporate cultural minefield and marketing the technology to the outside world, three key areas of failure observed by the author in many high-technology start-ups.

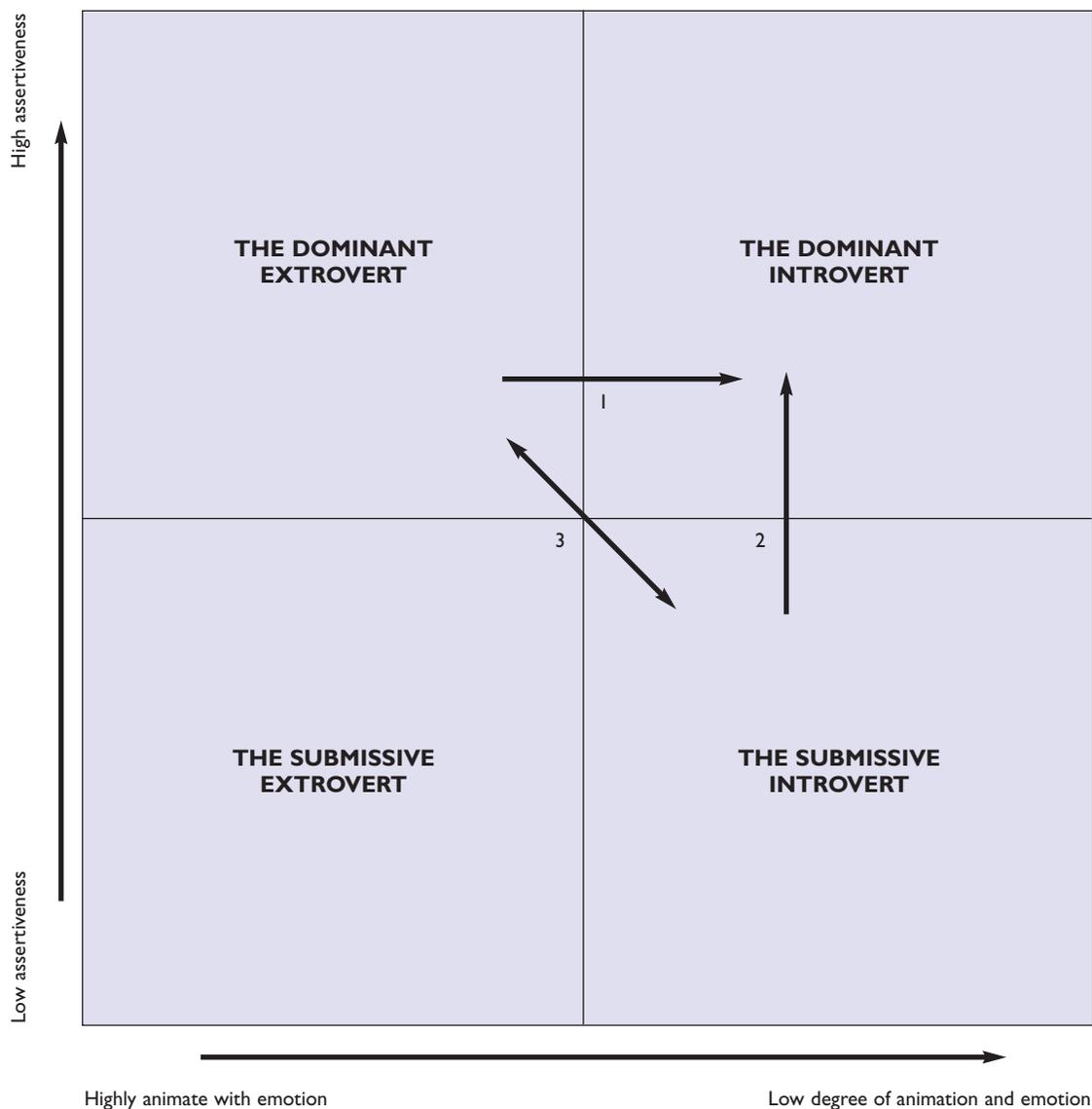
The team

As is so aptly written on the gravestone of industrialist and philanthropist Andrew Carnegie: “Here lies a man who was able to surround himself with men far cleverer than himself.” Easier said than done, especially when sensitive egos are involved, so richly cultivated in academia, and so brutally challenged in the business arena (at this point I can strongly recommend a reading of *If* by Rudyard Kipling which has one or two highly relevant one-liners).

The formulation of a winning team is indeed mission critical and yet the recognition of this fact is surprisingly overlooked. Too often appointment decisions fall prey to old alliances, friendships and trusted colleagues. The trust may be there but how does this equate with experience, knowledge and perhaps most importantly, the flexibility to grow and adapt with the quickly evolving business within which they play such a crucial role.

Bill Bowes, the founder of Amgen, not only realised the importance of the management team, he was the master of the assembly process, combining the technological excellence of an outstand-

Figure 1
Behavioural types



ing scientific advisory board, a now standard practice in high-technology companies, with the recruitment of a hardened industry expert, George Rathmann from Abbott as CEO.

Enticing a recognised industry heavyweight to join the ranks may be considered somewhat of a coup, and will no doubt please investors pre- or post- IPO but with it also comes draw backs. The transition for your newly appointed senior manager may be far from smooth. It is doubtful that initial round investments will provide for secretarial support in abundance, platinum company credit cards and seemingly limitless travel and entertainment budgets. The expectations may, and arguably should be, a far more hands on approach typical of the 'incubator' culture that is, or should be, the initial phase objectives of the start-up. Bob Swanson

of Genentech fame reportedly fixed a leaking tap while conducting a guided tour of the early-days Genentech facilities without dropping a sentence or showing any degree of distraction¹.

Management style must also be highly adaptable during the initial phases. Assertiveness and clarity of intention may come relatively easily to a dominant behaviour character type but will be seen as aggressive and intimidatory to a more introverted employee, a distinct possibility in hi-techs.

It is postulated that human behaviour can be characterised to some degree in terms of degree of assertiveness and degree of animation or display of emotion, extroverted or introverted. This highlights a significant challenge, and also a great opportunity, in building highly effective teams.

When the these two parameters are mapped out,

four boxes are defined which propose four dominant behaviour types (Figure 1).

Dominant extrovert (DE) – this group has a high degree of assertiveness and readily displays emotion and feelings.

Dominant introvert (DI) – this group has a high degree of assertiveness but refrains from excessive displays of emotion or feelings.

Submissive introvert (SI) – this group has a low degree of assertiveness but shares the dominant introvert's limited displays of emotion or feelings.

Submissive extrovert (SE) – this group shows limited assertiveness but shares the high level of expressive emotion and feelings as with the dominant extrovert.

You only have to attend company social events to clearly see these groups in action to various degrees of intensity. From the DE, prima donna salesperson standing in the middle of an adoring crowd and SE entourage recounting the latest sales victory, to the group of SI technical support personnel standing quietly watching on in quiet disgust at such a display of ego. Take a look at the next Christmas party and see what you think.

All four behavioural groups have distinct strengths and advantages and, most importantly, none are better or worse, right or wrong, although extremes of any of these four become extremely difficult to successfully communicate with. The challenge is to match experience, knowledge and behaviour with the required tasks. Typically the sales team fall somewhere within the DE grouping because they possess the ambition and drive to meet and interact with clients (indeed they thrive on it). However, ask them to fill in a report and document in detail any findings and you get the feeling they would rather have a tooth extracted. Enter the SI, the master of detail, the team member who one could happily assign a research project where attention to the finest points is critical – and they would enjoy it!

The relevance to high-technology is paramount due to the propensity to employ the 'masters' of detail who invariably fall into the SI category (although you, like I, can probably recall many exceptions to this stereotype). The point is, the greater diversity in a well-matched team, the more leverage the team has and the more likely it is to be successful. For sure, managing the team will not be free of conflict but recognising the strengths of individuals and communicating this, overtly and covertly, will certainly help.

With Figure 1 in mind, one can also imagine that persons skilled in 'moving around' the chart, adapting their behaviour and communication style accordingly will be far more effective and reduce potential conflict in the process. To be clear, this is

not being dishonest rather being very respectful to the sensitivities of colleagues and team members.

Another interesting aspect is that with time, behavioural patterns sometimes shift with career progression. Most commonly the shift from DE and SI to a more 'senior executive' DI behavioural type, perhaps a transition such as Oracle's Larry Ellison and a certain Mr Bill Gates respectively (shown by arrows 1 and 2).

One challenge for the DE sales team within the start-up is that they must effectively interact and communicate with technology enthusiasts who tend to occupy the SI corner. Due to the differing motivators and interests of these two groups there is a significant risk of potential conflict due to misunderstanding in communication (shown by arrow 3). To overcome this hurdle, awareness and acceptance is key from which the wealth of the diversity of the relationship can be harnessed.

As if things weren't complicated enough, the company will have inherited from its initial base of employees a set of norms and beliefs that, coming mainly from the ivory towers of academia, in part define the current culture in which the company operates which could be a complex mix of national, professional and organisational culture.

The culture

One challenge for the CEO is to guide the embryonic company through the 'incubator' phase where there is a much stronger focus on the needs of the team and the technological dream rather than achieving the tasks and installing procedures, systems and a hierarchy that will help to ensure future stability and success.

This is a challenge, because the incumbent culture is usually deeply entrenched and indeed highly resistant to exactly these medium- to long-term objectives. How many companies have you met where the CEO insists: "There is no hierarchy here" and "we do not need a system for this, we will just have a meeting". Admirable words, but once a critical mass is achieved, assuming such a point is reached in a viable manner, such procedures and some degree of hierarchy become a necessity – communication at the very least becomes just too complex.

One is not proposing overkill by any means, which has also been observed by the author on many occasions, but rather a healthy balance between achieving the tasks, addressing the needs of the team and of the individual². On a cultural level, this is best summarised by Trompenaar³ who postulates four predominant organisational cultures into which companies can be aligned.



Figure 2
Corporate culture
(Trompenaar)

If one considers two axes, complexity of hierarchy and task orientation, four cultural types exist (Figure 2).

Incubator Culture – where hierarchy and task orientation are extremely low. This is common in hi-tech start-ups where the resistance to hierarchy and ‘love’ of the technology is predominate, where science is conducted for the sake of science rather than the needs of the market.

Guided Missile Culture – where hierarchy is still low but a clearer focus is maintained on achieving the task that is usually achieved in collaborative project groups in partnership with the customer. This is postulated to be the ‘goal’ culture of most hi-tech companies.

Eiffel Tower Culture – where hierarchy and task are of paramount importance arguably to the detri-

ment of the employee. Classically apparent in the traditional Anglo-Saxon style companies of North America and northern Europe. Termed Eiffel Tower because of their rigid and complex pyramidal hierarchical structure.

Family Culture – where hierarchy is dominant, usually with a strong ‘father’ figure, even to the expense of achieving the tasks.

One could postulate that the hi-tech start-up must not only negotiate the potentially terminal transition from incubator to guided missile culture (arrow 1) but must also learn to understand, accept and adapt to the other two. Many drug discovery start-ups seek partnerships and alliances with partners or customers which are arguably predominantly found in the Eiffel Tower state (arrow 2) – a fact made abundantly clear when

References

- 1 Robbins-Roth, Cynthia. From Alchemy to IPO. ISBN 073820482X.
- 2 Adair, John. The Action-Centred Leader. ISBN 817224102X.
- 3 Trompenaar, Fons and Hampden Turner, Charles. Riding the Waves of Culture. ISBN 1857881761.
- 4 Moore, Geoffrey A. Crossing the Chasm. ISBN 1841120634.

making corporate presentations and entering into initial phase negotiations for licensing or ‘proof of concept’ projects with pharmaceutical companies.

These ‘customers’, however they are defined, are perhaps the biggest challenge for a start-up company and surprisingly the least understood.

The customer

All too often, vast resources are diverted into research and development at the expense, and even to the exclusion, of sales and marketing. This is a trap that invariably results from a natural bias of a scientifically orientated team and a highly engrained self-belief in the proprietary technology – “we do not need to market this technology as it is so good it will sell itself”. Such a mentality has been the downfall of many a start-up. Worse, still, when questioned about competitors, too often the response is “we do not have any competitors”. True, the technology may be revolutionary and outstanding but there is always someone else fighting for that very same juicy prize of providing a new technology platform or ground-breaking application.

A healthy understanding for the highly complex and fast moving customer base for which you are targeting should not be underestimated. Indeed, many companies lack a target at all, preferring to be lead by one potential project to another, hop-scotching from one potential application to another, confusing the market, the investors and the employees and draining the cash reserves in the process.

This sales-orientated reaction to the market is not to be unexpected; surely wherever one can sell product one can make money – right? Wrong, just as the early Biotech start-ups found to their costs, trying to be the panacea to everyone distracted focus and proved very expensive at a time when revenue streams are hardly free-flowing.

This is particularly true when one considers the type of customer you will probably be initially dealing with, the technology enthusiasts and early adopters. These groups form the initial phase of the technology adoption cycle⁴ and are the most receptive to new technologies, at a price. This group is highly demanding in terms of project support but with a clear strategy to utilise these relationships as a learning experience and an opportunity to refine the technology to marketable ‘whole-product’* applications, time with these customers can be very well spent.

Unfortunately, after a few successful projects, a momentum is produced which drives both the company and investors into a premature attack on the mainstream market, again a natural reaction but one that could lead to disaster.

In his book *Crossing the Chasm*⁴, Geoffrey Moore highlights the gap that exists between the technology and risk taking early market with the more conservative and risk-managing majority in late adoption and mainstream.

The mainstream high-technology market weighs far more highly an established base and shows considerable reluctance to incorporate a new, revolutionary technology unless it has proven itself with the former, early market customer population. To achieve this, the fledgling company with its technology must have won a certain critical mass of reference sites – without that, the company, its technology and its hopes and dreams fall into the aptly named and well documented ‘chasm’.

There is however hope, but it requires a clear focus on market orientation, segmenting your customers by application and then focusing resources on a niche application to win a dominant market share prior to moving on to the next and so on, until gaining broad market acceptance of the paradigm shift.

Another fatal mistake is to sub-contract or ignore altogether the interactions with the market. Probably in high-technology markets more than any other, networking, attending congresses and publishing articles is the most effective source of competitive intelligence and the most cost-effective, when done correctly, means of identifying and interacting with the early market customer base so critical for your transition to the broader market.

Seems common sense but all too often budgets for such networking and promotion are at the mercy of R&D to the point where some employees have to actually take holiday and pay privately to attend scientific congresses, exhibitions and seminars – incredible but true! R&D is vitally important to the high-technology start-up but integration with marketing is critical to ensure market-orientated whole product development.

Even if the importance of an event as a networking and promotion opportunity is recognised, consider who is sent and why. What are the goals and have they the knowledge, the communication skills and indeed sometimes the courage to promote the company and technology effectively. Have the key issues been identified regarding your killer application: why you, why now, what will you do better for me? Obvious questions, but they frequently remain unanswered in the eyes of the customers – customers who will be the ultimate judge of your technology.

A strategic approach to customers and the mar-

ket is strongly recommended by the author, as are operational, day-to-day tactical issues such as regular maintenance of customer data and contact records. Never lose track of your customers, partners or complementors. Technology now provides for simple, cost-effective, PC-based contact management systems, that keep a record of meetings, events, e-mails, letters, proposals, etc. Knowledge is power and knowledge about your customer and market is just as important as scientific excellence – ignore this fact at your peril.

Summary

- Build a management team with breadth and depth. Benchmark against the best.
- Be aware of potential conflict with culture, organisational and professional.
- Be aware of potential conflict with human behaviour but value the diversity it brings to a well-matched team.
- Invest in R&D but not to the detriment of the market and the customer.
- Analyse the market, segment, focus and then

network – be market-orientated rather than sales-orientated.

- Set up a simple contact management system.
- Understand the ‘technology adoption cycle’, beware the ‘chasm’ and ‘work the curve’.

* The ‘whole product’ consists of the complete package solution required by the customer for a particular application or requirement. **DDW**

Dr Charlton received his PhD in Biotechnology from Southampton University in the UK. He has spent the past 10 years in sales and marketing focusing on high-technology clients around the world. Four years ago, he founded PCC (www.paul-charlton-consulting.com), working as a management consultant and coach offering services in sales, marketing and management development. To maintain his commitment to academic study, he holds professorial status at the Indian Institute of Management, Bangalore, teaching International Business Negotiation.



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