

Reaping the rewards of empowerment

Reported by Preston G Smith

Founder and Principal, New Product Dynamics, USA



There are great financial incentives to accelerate drug development, thereby reaching peak sales sooner. However, the combination of regulatory compliance, the highly technical nature of drug R&D, and the large, risky investments required to bring a new drug to market encourage a methodical, sequential process executed by functional specialists.

Meeting	Improving Cross-Functional Performance in Pharmaceutical Development
Date	14-15 May 2001
Location	Philadelphia, PA, USA
Organizers	Tufts Center for the Study of Drug Development The Management Roundtable
Website	www.pharmcentric.com

This conference aimed to break out of this dilemma by illustrating advances that have been made in other industries toward concurrent development employing truly cross-functional teams. Presentations by outside experts were supported by several case studies from pharmaceutical companies showing how cross-functional principles are being successfully applied in the drug industry today. Together, they spanned the gamut of practice from traditional techniques to experimental approaches, which afforded participants an opportunity to identify techniques that would represent an achievable next step for their organizations.

Know your market

The keynote lecture was presented by Professor Robert Cooper, by any measure a leading voice in product development practice. His talk summarized the points critical to pharmaceutical development from his three popular books: *Winning at New Products*, *Portfolio Management for New Products*, and *Product Leadership*. He stated that new products often fail because of inadequate attention to marketing, especially in the US, where firms spend only 7% of their development budget on marketing activities, compared with 30% in Europe.

Another of Professor Cooper's Critical Success Factors is a *truly* cross-functional team. He observed that all too often firms use 'fake' cross-functional teams in which members are only representatives for their functions, with no authority to commit the function. Thus, the team has no power, and progress is slow.

Professor Cooper also addressed portfolio management. His research in this field has shown that the poorest performing companies rely solely on financial models to assess projects. Such models are especially inappropriate, he observed, in the early phases of a project, simply because there can be errors of up to 300% in the data from which the model is built. Scoring models are much more appropriate in these early stages.

Make your point

Jeff Antos, President of the Beacon Hill Technologies consultancy, described the principles underlying a high-performance team. Reinforcing points made by Professor Cooper, he observed that nearly all firms have teams, but to achieve high performance, these teams need the three A factors:

Authority

Team members have decision-making power.

Accountability

The team is accountable to the organization for the results it has agreed to deliver.

Availability of resources

People, information and money.

Mr Antos believes that companies resist moving to such high-performance teams for a number of reasons (Figure 1), not least of which is the belief that they are already in place!

Bill Mallin of Purdue Pharma lent credibility to Mr Antos' principles by showing how Purdue had put them to work, moving from a hierarchical organization toward high-performance teams. Over six years, the company has developed a system in which the product team develops the

Why do companies resist the transition to high-performance teams?

- Belief that they already have them
- Fear that teams will be uncontrollable
- Many of the perks associated with traditional structure are minimized or eliminated
- Potential loss of expertise as traditional functional roles change
- No 'case for action' to change is presented
- Misconception that teams are lazy, not doing 'real work', elitist or too much fun
- Fear that teams will not achieve results

Jeff Antos

Figure 1. High-performance teams: The fear of flying.

product profile, team member skills are matched to team skill needs, both teams and functions have budgets, and the core teams are composed of accountable members.

Co-location

Charles Gombar, a Senior Director at Wyeth-Ayerst, presented what he called a “work in progress” on his firm’s teams. The changes being made include integrating the whole business unit under one roof, a concept known as co-location, which can greatly enhance cross-functional communication and coordination, and thus speed.

Unfortunately, this powerful technique is waning as companies rush to globalize or are dispersed through mergers. Stephen Goldsmith, representing Business Engine Software Corp, tackled the popular but complex issue of building ‘virtual’ teams. He offered a ten-step process for knitting dispersed teams together through communication and collaboration technology. He also cautioned: “don’t get caught up in the hype of e-commerce. Instead, worry about managing your business. The software is only as good as the business practices you have.”

At New Product Dynamics consultancy, we have compiled a list of eight earmarks of fast-to-market teams, drawn from across all industries. The major distinguishing characteristic of the fast teams is a leader who has the power to make decisions, a variation on the same points that Robert Cooper and Jeff Antos made. I use the ‘ham-and-eggs’ analogy: in a skillet of ham and eggs the chicken is merely involved, but the pig is committed. This distinction makes all the difference in the world in team performance.

Characterizing the target

Susan Speziale, representing Pharmacia, described tools that her matrix-management teams use effectively. One such tool is a target product profile (TPP), which spells out *realistic* requirements for successful development and commercialization of a product. *Realistic* means that the TPP is developed with marketing involvement but is not a wish list. The team initiates the TPP early in the project, and it evolves throughout development. Figure 2 illustrates a TPP for an anti-pneumonia drug. The TPP gets all important product requirements in front of the team simultaneously so that developers can balance them, and the TPP also becomes useful when someone proposes a change in product direction.

Another of Pharmacia’s tools is target product labeling (package insert and summary of product characteristics). This draft of key data and labeling text also evolves with the product. Besides its internal uses to guide development, Pharmacia has found the target labeling to be valuable when shared with outside opinion leaders and with regulatory authorities. When reviewed early with regulatory agencies, Pharmacia has gained foresight into potential regulatory hitches, such as areas in which the agency had no direct experience and would have to prepare itself. Target labeling is thus a powerful way to speed development and ensure a user-friendly product.

Observe that Pharmacia’s target product labeling is a similar approach to that used by manufacturers of consumer durables, who write the user manual first, and then develop the product in accordance with it.

Target product profile: Product XYZ

Indication	• Community-acquired pneumonia caused by penicillin-susceptible and -resistant <i>Streptococcus pneumoniae</i>
Population	• Pediatric and adult patients
Dose and administration	• Solid and liquid oral forms; once-daily regimen for 5 days
Safety profile	• Better gastrointestinal tolerance compared to market leader
Health economics	• Sufficient data to justify reimbursement

Figure 2. Target product profile for an anti-pneumonia drug: A realistic set of aims, not a wish list.

The outside angle

David Zuckerman, of the Customized Improvement Strategies consultancy, characterized an ‘extreme’ example of cross-functional teams as a team linking a pharmaceutical company with a contract research organization. Although this may currently be considered unusual in the pharmaceutical industry, in other industries, such as automobiles or computers, it has become quite routine to farm out major portions of a development project to such a partner.

Nevertheless, Mr Zuckerman offered the conference several techniques for improving such cross-functional collaboration. One is an appreciation for what he calls ‘implicit’ versus ‘explicit’ knowledge. We get ourselves into trouble when we implicitly assume that others can read our minds, so in a team situation we must go to great lengths to explicitly state what we are thinking and what we desire.

This implicit/explicit distinction is especially critical for international teams, because, for example, Asians naturally operate more implicitly, while Westerners work more explicitly.

“...in a skillet of ham and eggs the chicken is merely involved, but the pig is committed. This distinction makes all the difference in the world in team performance.” **Preston G Smith**

The Lundbeck example

Allan Wehnert of Lundbeck, Denmark, provided the most provocative talk of the conference, judging from the number of questions asked. He described, in considerable detail, a system that Lundbeck has developed over the past eight years to manage development resources. Lundbeck identifies each development activity and assigns it a number. There are about 250 activities per development project. No resources can be applied until an activity receives its activity number and is thus entered into the system. Then resources and budget are linked to activities, and the development team can control approval of the activities. The availability and use of resources is now all covered by a rich database, which management monitors through a variety of reports.

Mr Wehnert emphasized that this system has become his company’s normal operational procedure, but cautioned that you can’t just buy such a system and expect it to work; it requires support by both senior management and the IT group.

Shakil Ahmed, now leading Integrated Product Development Solutions, but recently with IBM, described what he called “major surgery” to overhaul IBM’s product development approach. He mentioned that, due to IBM’s strong industry dominance for so many years, the company had lost contact with the marketplace. Thus, the surgery included reorganizing to create complete business groups from a structure in which marketing and sales was disconnected from manufacturing and development, linking only at the CEO level. This and many other changes have resulted in product development that is now 75% faster than before.

“...you can’t just buy a resource management system and expect it to work: it requires support by both senior management and the IT group.”

Allan Wehnert, Lundbeck

In a somewhat similar overhaul carried out within the pharmaceutical industry, Susan Hall described work done at GlaxoSmithKline. An employee survey revealed that product development lacked focus, clarity, and accountability. Consequently, GSK made improvements to focus teams on disease areas, empower them to make decisions, align incentives with accountability and spending with strategic objectives, and provide a single point of contact to functions. In this case study and another at GSK that Dr Hall outlined, the common findings remind us that significant change is not easy:

- Real improvement requires long-term commitment (longer than you think!).
- Rewarding teams equitably is difficult, especially for failed projects.

In summary, this first-of-its-kind conference exposed a hundred participants from many drug companies to leading techniques being used to accelerate drug development through more effective use of cross-functional teams. The co-sponsors, the Tufts Center for the Study of Drug Development and The Management Roundtable, are planning a follow-on conference. For details, watch www.pharmcentric.com.

Preston G Smith CMC

New Product Dynamics
3493 NW Thurman Street
Portland
OR 97210-1283
USA

Email: preston@NewProductDynamics.com

FURTHER READING

Tufts Center for the Study of Drug Development

Publications 1996 - 2001
www.tufts.edu/med/csdd/recntpub.html

The Management Roundtable

Newsletters and white papers
www.managementroundtable.com/publications.html

New Product Dynamics

Books, articles and newsletters
www.newproductdynamics.com/publications.htm

Product Development Institute Inc

Books by Robert Cooper and others
www.prod-dev.com/books.shtml

Meetings in the next issue

Beyond Genome 2001

Held in San Francisco’s Fairmount Hotel, this weeklong event covered bioinformatics, in silico biology and proteomics. The next issue of *Current Drug Discovery* will feature a report from the proteomics section, including sessions on high-throughput expression analysis and the impact of proteomics on product development. Other highlights include studies of protein-protein interactions, annotated proteomic databases, and advanced protein function methodologies, all of which offer hope to those seeking to accelerate product development.

www.beyondgenome.com/pro.htm

Rx Biotech Portfolio Management

Also in next month’s issue, Bill Lawson and Leslie Risk from Lilly’s Market Research team, will report from this fascinating meeting, held in Philadelphia, PA, on May 15. Topics such as portfolio diversification, milking the franchise, and project valuation were discussed in the context of R&D decision-making. Portfolio management is often seen as the ultimate balancing act between business and science, and to get it right you need market insight, good risk management, and reliable decision analysis.

www.srinstitute.com