Relationships to Succeed
Strategic Partnering versus Traditional Customer / Supplier Model

PDA Outsourcing & Contract Manufacturing
2015
– Silke Seeber
This man has a problem:

- He needs a new family car
- His wife is pregnant with triplets (at least this is what the doctor told them)
- Their garage is rather small
- They love to have outdoor sports like biking and skiing

→ The car needs to be huge, but fit into the small garage
The man who searched for a family car

The man would build his own car as he has much know how in developing cars with special needs, but he does not have the facility.

- He does not want to spend all the money for an own manufacture facility
- He does not have the time as a pregnancy has defined timelines, that cannot easily be prolonged
- He does not want all people to know that they expect triplets
The man who searched for a family car

He decides to look for a vendor that can offer the right car.

He starts his search for a vendor in the usual vendor market.
Highly dynamic market environment

Emerging markets

M&A & industry consolidation

High unmet medical need for NBEs

High uncertainty of forecasts/demands

Sustainable worldwide pipeline of NBEs

Outsourcing

New competitors

Emerging markets

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New competitors

Biopharmaceuticals market with attractive growth

Emerging markets

M&A & industry consolidation

NBE success/failure of clinical trials

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Why do companies outsource?

**No in-house capacities**
- Avoid investing in facilities and staff
- Increased capacity needs

**Management of risk**
- Back-up supply
- Contingencies
- Urgency/ time-to-market

**Free up in-house capacities**
for new pipeline projects (e.g. outsourcing of legacy products)

**No in-house capabilities**
- Lack of internal expertise, technologies or available staff

**Strategic partnerships**
leverage synergies in development and manufacturing

**Cost control**
CMOs offer predictable service/price packages
The man visits many general vendors, that offer many general cars, but no car is really the car that fits all his needs. The general vendors do not know our man’s special needs and act according to “first come – first serve”.

The man now looks for a vendor who will offer a car that will be customized to his special needs.

He now looks for a partner rather than just a vendor.
Shift from transactional to strategic outsourcing

**Transactional**
- Cost and Headcount Management
- Capacity Use Optimization and Contingencies
- Lack of Know How

**Strategic**
- New Business Models (e.g. Virtual SCM)
- Focus on Core Competences
- Focus on Selected Therapeutic Areas
- Investment and Risk Management
Strategic Outsourcing: new opportunities and market growth

- Outsourcing as a second choice after in-house production
- Cost driven outsourcing
- Outsourcing used to cover demand peaks

- Co-Investment and Risk Sharing Partnerships
- Integrated Supply Chain Models
  Increase CMO Demand
- Strategically important products are outsourced
If you were the man looking for a partner:

What would be the criteria for the selection?
Success factors for a CMO to become a strategic partner

- Regulatory compliance and high quality standards
- Reliability of supply and high customer service level
- State-of-the-art process and production technologies
- Flexibility in capacities including economy of scale
- Competitiveness in cost and timelines

- Establish a good working relationship
- Comply with my company’s quality standards
- Protect intellectual property
- Stick to a schedule
- Have regulatory compliance expertise

Source: BioPlan associates, Inc. Survey 2014
Boehringer Ingelheim BioXcellence™ produces a mAb in Biberach for a leading pharmaceutical company. BI will be launch site for this product; BLA is in preparation.

What is key to a successful collaboration?

- Understanding limitations of the vendor and the customer.
- As a customer I need to know the CMO's internal processes and practices.
- As a vendor BI should know the stakeholder expectations and timelines.
- While managing expectations and timelines, we should keep in mind the risks and their impact on the project deliverables.
- Having a plan B for the identified risks and decision making criteria.

Remarkable:
The customer mentioned only soft facts and decision making criteria.
The decision for a service provider includes the qualifying criteria and decision making criteria.

- **Qualifying points** = all providers, that do not offer these points will be excluded from the selection process

- **Decision making points** = points that will be considered for the final decision

Imagine your selection process for a specific airline:

Obviously, you choose the airline that offers the best connection for the cheapest price…?

But would you really fly with an airline that never performs maintenance on their aircrafts?
Typical qualifying and decision making criteria for the selection of outsourcing partners in biopharmaceutical business:

<table>
<thead>
<tr>
<th>Qualifying</th>
<th>Decision making</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality / Quality Systems</td>
<td>Communication</td>
</tr>
<tr>
<td>Regulatory track record</td>
<td>Flexibility / Solution orientation</td>
</tr>
<tr>
<td>Technical know how</td>
<td>Ownership / Passion to succeed</td>
</tr>
<tr>
<td>Facility fit</td>
<td>Customer relationship management</td>
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</tbody>
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Points to consider

- Timelines
- Strategies from transfer to submission
- Definition of milestones
- Governance structure
- Involvement of relevant disciplines
- Documents
- Gap analysis & risk mitigation

Lessons learned

- Face to face meetings are very beneficial
- Call for cross functional mindset
- All supportive activities should be considered from the start
- Consolidate content and tracking of documentation
- PIP during initial runs or at least during critical activities

Information Exchange
- BI’s Document requirements
- Customer documents and descriptions
- Questions and Answers
- F2F @ donor site to discuss process details

Common Process Understanding

Small Scale Preparation
- Ship Working Cell Bank & media
- Preparation of process description
- Initiate first small scale studies (DoE)
- F2F meeting

Ready for Small Scale

Setting Up Large Scale
- Results of small scale runs
- Finalization of process descriptions
- Agree/sign process descriptions
- F2F meeting

Ready for Large Scale
Joint Steering Committee (JSC)
Milestones, decisions the team cannot solve, Guidance if needed

Joint technical team = Primary decision making body for the individual project

Joint Project SubTeams (JPST)
Technical topics and alignment

USP
DSP
QC
QA
SCM
DRA
Real life example: Team & Governance

Depending on company culture, the threshold for escalation to a steering committee is variable.

The escalation threshold needs to be discussed early on to avoid miscommunication in the project work.
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A key factor is trust between the PMs on both sides. Along the road this results in trust between the teams.
“I think we built the trust actively as the work progressed. We were very proactive. We had the vision of where to go and the ability to articulate it. We also possessed quick shifting abilities. There is almost always too much information. But knowing what to note and what to ignore kept the project on track.”
The man who searched for a family car

After exchange of needs and information, the selected vendor offers to even adapt his facility to ensure all needs can be served.

In return, the man agrees to buy the car even in the case the doctor was wrong and they will not be having triplets.
The man who searched for a family car

The CMO – customer relationship now turned into a real strategic partnership:

The man´s core competency is car development and he has a vision of the car.

The vendor´s core competency is producing cars.

Partnering of these two leads to a Win – Win Situation
The biopharma market is a dynamic, constantly growing market. mAbs remain the dominating molecule class in biopharma, Top 20 biopharmaceuticals account for ~ 100 USD bn in 2014. The biopharmaceutical contract manufacturing market is growing constantly, following the biopharma market trend. Market growth and dynamics lead to new business models like strategic partnerships and/or manufacturing network alliances. There is a clear trend towards strategic outsourcing shaping the relationship between Product Companies and CMOs. As a consequence the CMO plays a more integrated role in the production chain.
Real life example

• During planning and building of our G104 facility in Biberach, a customer contractually secured a number of production slots per year
• The risk for idle capacity was reduced for Boehringer Ingelheim, the risk for not getting production slots was reduced for the customer
• To fill the production slots, multiple processes were transferred to Biberach by now, leading to a deep understanding of facility fit
• Synergies from the multiple process transfers can be leveraged to achieve competitive timelines
• Common success leads to established trust, facilitating the next work package
“Looking back, I had a wonderful time, and most importantly, I knew I was working with good people.

No matter, I am very, very grateful for the BI interaction – knowing a whole new group of people who share similar views on professionalism and focus on quality, is very cool.”
We help you to better focus on your strategic priorities

Benefits for our customers:

With Boehringer Ingelheim BioXcellence™ on their side our customers can focus on their core competencies and develop new molecules for new therapies.

Our customers have royalty free access to technologies and high throughput platforms which provide material in industry leading timelines.
We are a pioneer in biopharma and strategic partnerships

- **1963**: Research in chicken Interferon
- **1984**: New GMP biopharma plants of own NBE: Biberach/Vienna
- **1987**: Interferon
- **1998**: Additional new large scale plants Biberach/Vienna
- **2003/05**: Establishing of global biopharma organization with a global account management structure
- **2010**: Entering biosimilars business
- **2011**: Acquisition of US biopharma plant (Fremont)
- **2013**: Successful handover of manufacturing building in Shanghai (China)
- **2015**: FDA approval of idarucizumab (Praxbind®)

**Strategic Alliances**
- **1987**: First approval of own NBE: Actilyse®
- **2010**: Strategic decision for Contract Manufacturing Business
- **2013**: Strategic alliance with Zhangjiang Base Co. in Shanghai, China, to build a biopharmaceuticals facility

**Locations**
- **Biberach, Germany**
- **Vienna, Austria**
- **Fremont, USA**
- **Shanghai, China**
Our outstanding Track Record:
26 marketed Biopharmaceuticals

- 1987 Actilyse
- 1996 Verluma*
- 2001 Metalyse

- 1984 Berofor* (Microbial)
- 1990 Imukin
- 1999 Beromun

- 1998 Synagis (US) MedImmune / AbbVie
- 1998 Enbrel (US) Pfizer / Amgen

- 1995 Betaferon Bayer

- 2001 Actimmune (US) Horizon
- 2001 Campath (US) Genzyme
- 2003 Bexxar (US) GSK / Corixa*

- 2004 Erbitux (EU) Merck Serono
- 2007 Preotact* Interferon* Nycomed * Kadmon
- 2009 Vectibix Amgen

- 2010 Forteo Lilly
- 2010 Revasc / Iprivasc ** Canyon
- 2010 Prolia (US / EU) Amgen / GSK

- 2011 Natpara Shire
- 2013 Kineret Swedish Orphan Biovitrum
- 2013 Activase Genentech

- 2014 Proleukin Novartis
- 2015 Praxbind

*Products no longer on the market
**no longer manufactured by BI
Our mission – Producing Value

- One-stop shop: from DNA to Drug Product
- More than 35 years expertise in biopharmaceuticals
- Unique industry track record of 26 commercial biopharmaceuticals
- Multiproduct first-class facilities – We are where you need us
- Excellence in process science and technology
- More than 2,800 experienced employees
The man who searched for a family car

You want to know how the car looked in the end?

Well, you need to watch the streets, because neither the man nor the vendor disclosed the final result.

→ They strictly adhered to intellectual property protection rules.
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