

BIOVALLEY Newsletter

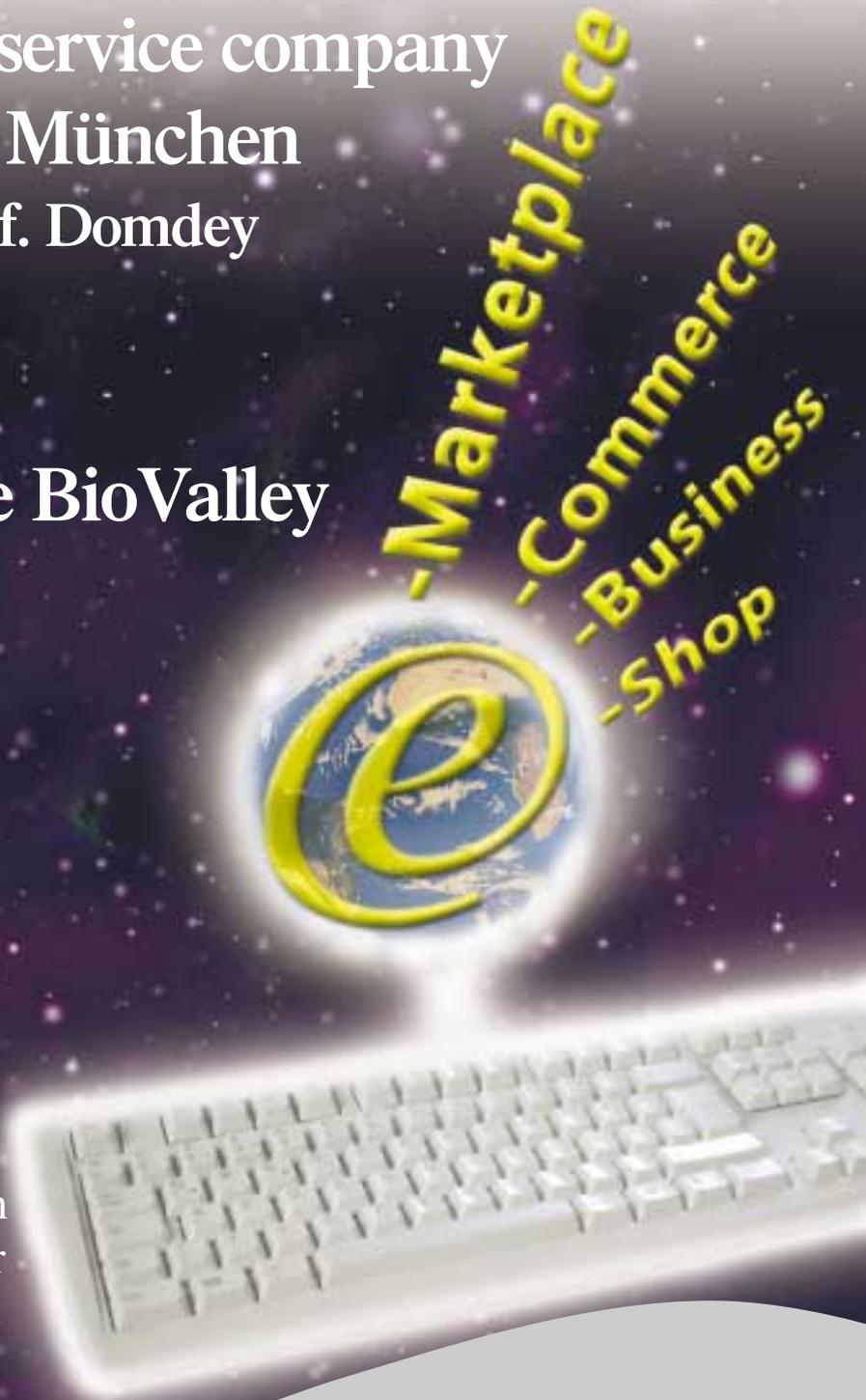
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■ Bio^M AG – the service company
of the Bioregio München
Interview with Prof. Domdey

■ Proteomics –
Research in the BioValley

■ Dossier:
e-business
in life sciences

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BIOVALLEY

The Life Sciences Network

The Future of the Pharmaceutical Industry – in a light fashion

Where is the pharmaceutical industry going?

Existing interaction between enterprise vision and tactical realisation is well known for years also in the pharmaceutical industry.

By using these modern methods, enterprises have for sure realised successful and high qualitative projects. Nevertheless, stagnation of e-projects is clearly visible in the pharmaceutical industry.

Within everything that is «e-» (e-business, e-research, e-clinical, e-HR), the complexity grows in a multidimensional way, with great impact on the realisation of projects. The situation can be described (may be simplified, but easy to understand) with a missing link between «the top» (the vision) and «the bottom» (the realisation). Why do we have this gap, even when using sophisticated methods? To answer this question we have:

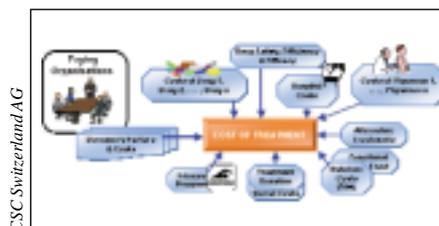
1. to keep in mind the today's market situation of the pharmaceutical industry
(1. Cost of Treatment vs. Cost of Drug)
2. to make understandable the changes Pharma experts are painting
(2. Marketing discovers the new customers)
3. to analyse the experiences of today's active «e-projects»
(3. Pharma future: create by visionaries, not driven by projects)

At the end, our scope is to present propositions to positively influence the realisation of e-projects.

1. Cost of Treatment vs.

Cost of Drug

Starting with the payers organisation (e.g. HMOs, assurances), and driven from USA, we see a clear move toward paying decision no longer based just on costs of a drug. Because of pressure on healthcare costs, total cost of treatment becomes more and more the main criteria. In addition to cost of drug, total Cost of Treatment includes a large number of additional consolidated information, like hospital costs, physicians charges, alternative treatments (e.g. acupuncture), special diet costs (e.g. functional food, vitamins), costs for rehabilitation programs, and, extremely important, social costs. Lowering social costs of diseases is one of the main motivators of drug research & development at all. Sick people loose working days adding costs in two dimensions: based on kind of disease and on social position of the patient. Without any doubt, keeping into consideration the total cost of treatment is a much better decision criterion between two treatments, as just comparing the costs of the two drugs. Though, it is very difficult today to collect and consolidate all the necessary information for total cost of treatment.



Cost of Treatment

But, even if complex, this consolidated information will have incredible strategic competitive advantage for the first company investing in this area and this for two reasons.

The first is marketing oriented, where, based on comparing with competitors' treatments, pharmaceutical companies can buy-in payers, authorities and patients to prefer their «disease solutions».

The second reason considers that, due to genomics and proteomics research, drugs (and treatments) of the future are expected to be «one shot solution» for a disease (or for a predisposition to a disease). Now, to compensate high R&D costs, treatment costs will be very high and need to be defended in front of patients, payers, and healthcare authorities. The only ways to protect high treatment costs are (1) by using total Cost of Treatment as a business case, and (2) by showing the savings to each stakeholder with appropriate facts & figures.

Modern information systems used in major hospitals in USA are showing successes by consolidating this basic information at reasonable costs (e.g. http://www.csc.com/industries/health_care/library/manor.pdf).

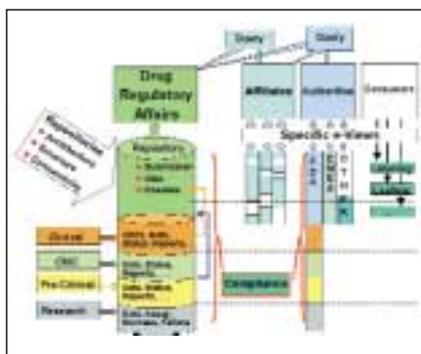
Necessary steps toward consolidation of total costs of treatment go through innovative usage of newest technology, therefore risk management become crucial to avoid major issues. Ways to

minimise risks are in using «Best Practice» (global collections of know-how out of successful projects) and «Informatics Labs» where these technologies and solutions are tested.

2. Marketing discovers the new customers

Let's change the stage, looking into the drug research factories. Studying genetic information, experts are looking forward to identify 25'000 biological target (groups of genetic similar persons, with potential needs for specific drugs or treatments) until 2002. Proteomics research is expected to deliver information for more than 4'000 potential drugs.

Rapid advances in analytical computation techniques are making significant inroads into target identification and drug selection. Because of this, within the next months an enormous amount of interesting targets will knock at the door of drug development. It will be impossible to handle these targets tornado in the same way (infrastructures, organisations) like in the past. Costs until submission, are too high and errors must be avoid with intelligent use of computer technology. Today, information integration can be easily realised (as shown below) to document not only successes but also errors in a future oriented information management strategy.

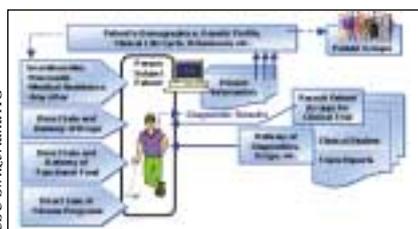


Information structure and management

Supposing we have drug research under control and the right organisation as well as information to support drug development process, we are still going to meet the real critical issue of the future. Before sale of drugs and treatments is approved, parallel and multidimensional clinical trials are necessary. Infrastructures and processes must be reviewed based on these challenges.

Personalised therapies, life style drugs and new diagnostic tools will dramatically narrow choice of patients for trials. Where are the right patients with the exact matching genetic picture?

Marketing focus is going to change from physicians and hospitals to patients with the necessity to identify them for supporting recruitment, probably with the following process:



Obtaining patient information

3. Pharma future: create by visionaries, not driven by projects

As we can see, information technology plays a key role in every part of the new pharmaceutical picture. But, looking to project experience, the missing link between «the top» (the vision) and «the bottom» (the realisation) become visible by analysing successes from the senior and executive management's view.

The necessity of creating the new pharmaceutical world without lowering into project details is given from the fact, that very few people are able to keep in mind the big

picture. On the other end, without the big picture, single informatics projects are driving the changes and no feedback is possible on decision impact.

Based on experience in management consulting, the best way is to make the realisation of the vision visible and measurable e.g. as follows:

- painting the world of pharmaceuticals in an easy but complete way
- confronting the vision with the picture to visualise consequences of different ways with all their influences
- comparing the basics of the strategy with these constructs and continuously, consequently control the realisation
- making consequences and connected influences measurable (e.g. with mathematics constructions) to permanently visualise which results are influenced by which decisions.

In this way, executive management has a very active part. By visualising the results and simulating possible scenarios, executive management drives enterprise development without lowering in details.

This new kind of tools (together with management coaching) dramatically enhances the visibility of vision's realisation. The installation of these tools (e.g. «Think Tools») is accompanied from a series of workshop with a consulting company and the tool supplier.

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