

Science is the Future

A strategic initiative to make education more efficient

By Peter Sokol, Managing Partner, CSR Consult



COMPANY DESCRIPTION

Bayer, founded in 1863 in Germany, is a globally operating enterprise with core competencies in health care, agriculture and high-tech materials. As an innovation company, it sets trends in research-intensive areas to improve the quality of life. Bayer aims to create value through innovation, growth and high earning power. In 2012, Bayer employed 110,000 people, with sales of €39.7 billion, R&D expenses €3 billion.



THE OPPORTUNITY

For several years Bayer in the Czech Republic and Slovakia has been facing a lack of young professionals and researchers in the area of natural sciences. It is not only in their own Human Resources but also in their potential customers and clients. It has become a serious obstacle for the further development of the company, its competitive advantage and future development in these countries. Available data showed that it was not an issue for Bayer only:

- Low number of MST (Math, Science, and Technology) graduates from universities is a general issue not only in the Czech Republic but all around the European Union. The long - term predictions suggest that the situation might be very serious by 2020.¹
- The graduates in Science are at the moment crucial for the future competitiveness of the Czech Republic.²
- Increasing the number of graduates from MST would help Bayer and at the same time the whole society could benefit from this change.

THE STRATEGY

As a part of their corporate citizenship Bayer had been involved in various educational projects before this initiative was established. The problem was that the projects used to support education in general and there was no specific aim that would offer answers to the problem Bayer faced. That was why the management of Bayer supported research to identify why there is such a shortage of skilled workforce. In cooperation with external experts Bayer found out that the problem was not in a low number of classes, insufficient equipment of the schools or text books and curriculums.

¹ European Roundtable of Industrialists - Mathematics, Science & Technology Education Report, 2009.

² It was described in detail in the Framework strategy for competitiveness prepared by the Government's National Economic Council published several years ago.

Available data³ discovered that:

- A didactic instructional model in Czech schools at both primary and secondary levels was perceived by pupils to be over theoretical and 'boring'.
- It could be one of the main reasons why so few go on to make science their career choice.

If we put it simply – pupils have no idea that these subjects can become an important step for a promising career and the natural sciences are prestigious for the future.

It was decided then that Bayer as a representative of science industry can be used as an example for career advising at schools and that future projects should focus more on cooperation with schools in the area of career guidance. The initiative turned into a project called Science is the Future.

Bayer was really active at the very beginning of the program development – both in content (to define what amount of time and work the employees can invest in meeting with schools and what kind of skills they can offer) and in communication (using the company networks to raise awareness of the issue).

The program was designed for the 8th grade at Czech elementary schools (age 14-15) or 3rd grade at secondary schools (age 17-18). Both these age groups are about to make a decision about their future career so it is really crucial to help these groups understand all opportunities.

The coordination of the project was put into the hands of AISIS, a NGO with many years of experience regarding projects at Czech schools, which ensures a minimal administrative burden for the participating partners.

Some parts of the project typically include:

- excursions in the company and discussion with employees
- preparation for a mock job interview
- Scientific workshop etc.

From the perspective of shared value we believe that this initiative combines

- Increasing productivity in the value chain to enlarge the number of potential employees for Bayer.
- Strengthening regional cluster to improve educational outcomes in the regions where Bayer operates.

“There is a real shortage of young experts in the fields of natural sciences and modern technologies in the Czech Republic. Therefore as a company focused on innovations we want to show pupils, parents and teachers that the natural sciences are not only fascinating and enjoyable but also important for the future.” Frank Held, Managing Director, Bayer Czech Republic

RESULTS – VALUE FOR BUSINESS AND SOCIETY

The number of participating schools has expanded significantly - from two at the beginning to sixteen this year. The total number of participating students is more than 400. However the program is still at its infancy – and it is quite difficult to provide numbers showing if/that there are a higher number of young people in Math, Science, and Technologies. Based on the evaluation questionnaires results it seems clear that the participating pupils were happy with the content and form.

From the project evaluation among all participating students and pupils we discovered that:

- 63% of them rated the project as "excellent" or "very good".

³ E.g. The Programme for International Student Assessment (PISA) or TIMSS (Trends in International Mathematics and Science Study).

- 67% of teachers confirmed that the participation in this project led to the need for further study or interest in natural and technical sciences among students.
- For 38% of participants the program influenced their opinion or changed their views on education and career in these fields.

Company representatives most appreciated the opportunity to increase students' interest in natural and technical sciences, and raise awareness about their industry and its prestige. All participating schools considered as the greatest benefit that students were encouraged to think about their own careers, as well as appreciated the opportunity to learn about careers in the field of natural and technical sciences. At the moment it is important for Bayer to know that the direction they took in a project is right – that is why the field analysis at the beginning of the project was so crucial and ongoing evaluation is supported. As it was mentioned the current feedback is very positive – not only from pupils but from their teachers as well.

LESSONS LEARNED, CHALLENGES AND OUTLOOK

Four years after the initiative started it has been obvious that it is crucial to involve more partners and stakeholders who will support and spread its ideas to raise the awareness about the career opportunities, and help involve HR experts in the school education to make the system more efficient. In 2013 there were four more companies involved including IBM, ABB and Skoda Auto and the initiative continues to grow. Also the efforts have been appreciated even on the government level. The initiative received the official patronage of the Czech Ministry of Education, Youth, and Sports and the Slovak Ministry of Economy.

A prestigious Czech economist Michal Mejstrik made a comment on the project: "*Czech pupils have a great resistance to MST and they cannot imagine their future career in these areas. It reduces the number of graduates who are crucial for the future competitiveness of the Czech Republic. I appreciate that the project Science is the Future emphasizes career motivation for MST and fulfills our recommendations of the Framework strategy for competitiveness prepared by the Government's National Economic Council.*"