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The Innovative Pilot High
School at Poitiers:
Futuroscopie 10 Years On

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The Innovative Pilot High School at Poitiers

FUTUROSCOPE: 10 YEARS ON - THE INNOVATIVE PILOT HIGH SCHOOL

The Innovative Pilot High School is part of the *Futuroscope* complex near Poitiers in the Department of Vienne, eastern France. Designed and financed by the Department, the *Futuroscope* is the only complex in Europe based on creating a synergy between the activities of leisure, work, technology, training and education. The concept of a theme park, surrounded by a high technology development, unlike any other, was first conceived in mid-1983.

Since then, the Department of Vienne has invested (and is still investing) 1.6 billion francs in the project. This investment, and the success of the enterprise,

has attracted an equivalent investment from the State, European authorities and private enterprise, leading to the development of high-level education, training and research facilities, and significant investment in associated areas, such as hotels and office complexes.

Construction work commenced in December 1984. The park was first opened to the public in 1987 with an initial total of 225 000 visitors. At that stage, it included only the *Futuroscope* pavilion and the Innovative Pilot High School, which opened its doors to students the same year. Over the past 10 years, the

Futuroscope's training, forecasting and communications area gathers several teaching and research institutions.

- *The Innovative Pilot High School/University Overlapping Project involves total co-operation between a high school and a university (from 0-level year through to the fifth-year university level).*
- *The National Correspondence School (CNED) makes the Futuroscope a centre in France for the development of teaching by correspondence.*
- *The International Prospective Institute organises symposia and conferences for managers in the fields of economics and social sciences.*
- *The National School of Advanced Mechanics and Aerotechnical Science (ENSMA) is a major engineering school specialising in the fields of aeronautics and space technology.*
- *The Engineering Science Laboratories house research facilities devoted to the study of the mechanics of liquids and solids, physical properties of materials, electronics and chemical kinetics.*
- *The Poitiers University and CNRS (National Centre for Scientific Research), in partnership with ENSMA, form the foremost teaching and research centres in France for the engineering sciences.*
- *Juripole, the Law and Media Centre (International Legal Information Centre) represents a service centre unique in Europe in the field of European and international law.*
- *The Higher School of Management Staff in the National Education System will provide initial training and further education for inspection and management staff in the French Ministry of Education.*

Futuroscope has continued to expand and has become a major attraction with 2.8 million visitors in 1996.



Futuroscope site had an architect-director who controlled the whole project with the separate building projects having individual architects.

WHY AN INNOVATIVE PILOT HIGH SCHOOL?

The Innovative Pilot High School (High School and University) is a unique project, with both institutions being located in the same building. The university occupies the top two floors. This system offers students access to educational training which includes the high school years plus five years of university-level training. After completing their high school education, students are able to make a seamless transition to university studies.

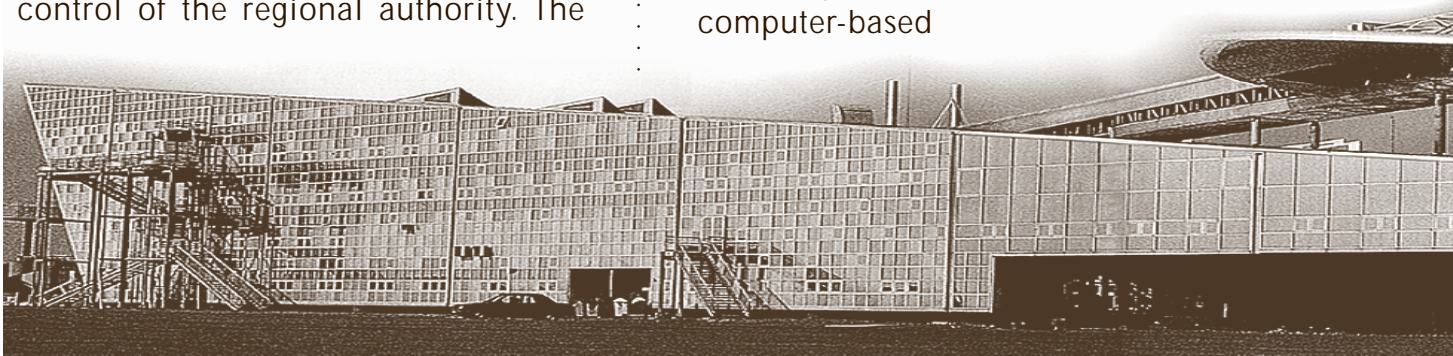
The facility attracts students who wish to specialise in the fields of technology and communications. The university courses focus on the training of industry professionals and offers three specialist areas: communications/law; science/communications; psychology/ law.

The idea of the *Futuroscope* was initiated in 1983 by the Minister of Education. It opened in 1988 and was designed for traditional pedagogy and was the first school to be decentralised under the control of the regional authority. The

INFORMATION TECHNOLOGY AND COMMUNICATIONS (IT+C) STRATEGY

At the regional level, the authorities are now trying to organise an Intranet site for 120 high schools, in order to enable students to communicate among themselves. It will then be linked to a national-level Intranet site including administrative staff. All high schools will be given full access to the Internet at the price of a local call.

There are currently 300 computers available for the 500 pupils. At present, because of difficulty with cabling (cables installed 5 years ago are not adaptable to new technologies), there are no computers with access to the Internet. However, there are plans to develop a separate room, specifically cabled for 25 computers, which will provide access. There is a Centre for Information and Documents which can be accessed by computer. Students are not required to have their own computer, as most computer-based



homework or work assignments are carried out within school hours. Boarders at the school have full access after hours. 200 out of 500 students are boarders, but current facilities are not adequate to meet the demand for places. Parents may contribute towards costs.

HAS IT BEEN SUCCESSFUL?

Demographic Changes since 1987 and the Regional Development Plan

The number of young people in the region is decreasing but this is, to some extent, compensated for by the increasing length of time that students remain at school. Thus, the role of the schools in the Region will change to meet changing needs. The Region is therefore moving into long-term training and learning and is looking at ways of opening up to and increasing the amount of resource sharing with the community.

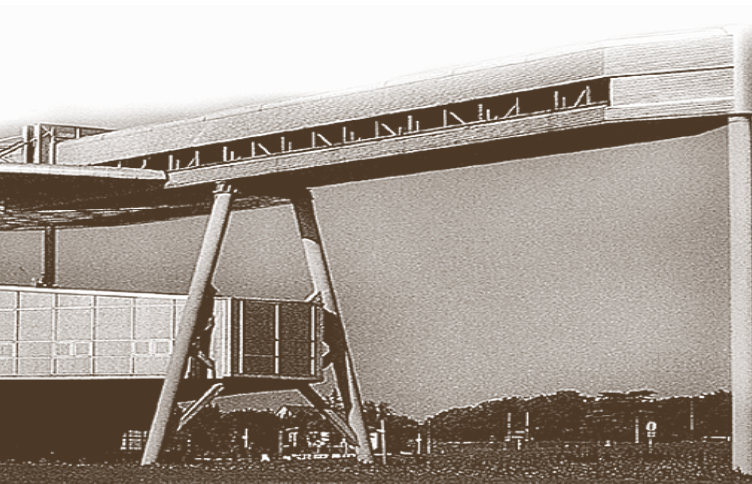
The Region is also examining the role of the high school as an economic generator for the Region by acting as a resource centre for local business and innovative transfer of technology

(e.g. testing new products etc.). However, this concept does not yet work perfectly because the high school is still separated from the university with each having different administrations. The compartmentalised education system at the various levels, and the necessity to have the support of the school principals (who are funded according to national priorities) at local level to agree on Regional strategies and needs, have posed some difficulties.

A rapidly emerging approach is the idea that training and schooling are for lifelong learning. The Regional Development Plan - which includes a 5-year plan for training - promotes relations with the professions (commencing an ongoing dialogue) and with the aim of assessing needs (i.e. what exists and what is needed). But it has proven difficult to anticipate developments as businesses generally have only 6-month cycles. Maximum flexibility of the facilities is seen to be the solution to this problem.

THE DESIGN AND FLEXIBILITY OF TEACHING SPACES

The academic building, now 10 years old, was originally designed for a traditional pedagogy, with large groups of pupils in each classroom. The majority of classes still have at least 30 pupils, although 20% to 30% of classes are now taught in smaller groups. While there is a need for smaller rooms, rather than the traditional classroom, the building itself as with most schools does not have the flexibility in terms of design or construction to respond or to meet this demand. This is also a problem with accomodating newly evolving pedagogy.

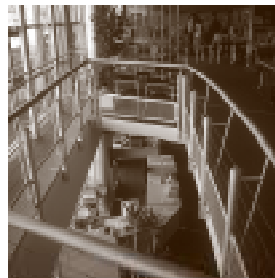


The high school was already modifying buildings that were only 2 to 3 years old. It seems to teachers that pedagogical requirements were not getting through to the designers. It now needs flexible buildings so that groups can divide into a variety of smaller spaces.



The information technology and communications focus has lent itself to much project based learning activity. On a Sunday, as the school was open for a European Union wide Internet demonstration day, groups of students were demonstrating and actively involved in projects which used the Internet to develop cross-cultural project based activities. One group was working on the Internet in the Chinese language with the assistance of their Chinese language teacher! Others demonstrated a three-dimension computer animated fly-through model of the Futuroscope site complete with music. Viewers were able to be taken through the inside of buildings as if in a miniature flying vehicle. This demonstration software was entirely prepared by the students.

The high school is open for continuing education, but only to a limited extent at this stage – the safety of pupils is paramount. There is only one entrance to the building at present because of the need to limit access to certain areas. If it were to be opened more extensively to the public, the centre would require some redesign - i.e. public/shared/private areas which would have three levels of access – student access being the first priority. Additionally, with the expensive equipment in the centre, the school needs to control access. Sharing with the community works well with the sporting facilities, where there is special access for the community and different access for students.



CONCLUSIONS

Having started this initiative a decade ago, the school is well on the way to solving many of the technology infrastructure, software, support and teacher training problems now being experienced in other schools and in other countries. The Regional authorities, in association with the school, the educational precinct, the technology park, Futuroscope and the clustering of information technology and communications related activities, have developed a national and international identity in what is a very special Region of France.

Two major features are the project based learning activities and the sharing of specialist teaching spaces by both the high school and the university. Quite well appointed and equipped laboratories are available for both types of students, with project-based experiments in progress.

