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To
United Nations Industrial Development Organisation

Contract No.95/001 IR
UK/UNIDG Restructuring Project
Industrial Design Support

FINAL REPORT

18th February 1996

From
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FINAL REPORT

1/ Introduction

This Report describes the work carried out on this Contract by main contractor Manchester Metropolitan University and sub-contractor 7D Product Development Consultancy from the UK, together with counterpart organisations in Poland, the Academies of Fine Art in Warsaw and Krakow. The work was directed towards raising awareness of the value of industrial design as a discipline in Polish industry and government, and training Polish design professionals and academics in further techniques of management of new product development.

Initially, work was planned in accordance with the best current information. During implementation of the Project, certain limitations arose which led to a review of the Programme. The proposed subsequent changes were fully discussed and agreed with UNIDO and with Polish Government agencies, and these refinements were considered as beneficial to the Pilot Project and to attainment of the core aims and objectives of the Contract.

The report describes how information acquired during the Project indicated opportunities to expand the activity and achieve an impact in excess of that thought attainable within the budget of \$19,000. Communication and discussion has been stimulated between many Polish experts and institutions resulting in definite plans for future development which can build on this initiative, and establish in Poland a permanent capability of strategic new product development management to enhance the future profitability of Polish manufacturing.

The Report is structured as follows:

Preliminary section

2/ Project overview

Main section

3/ Work completed according to the Terms of Reference.

4/ Limitations encountered

5/ Action to overcome limitations

6/ Activities resulting from new information.

7/ Achievement of overall objectives

8/ Additional outcomes

9/ Conclusion and recommendations

2/ Project overview

The command economy conditions existing in Poland until 1989 resulted in preserved markets for the majority of indigenous products. The absence of competitive market forces led to a static era of product evolution, where manufacturing costs; user benefits; and customer appeal were given low priorities. With the advent of the free market and the need to secure exports and reduce imports the product attributes described above became critical.

Therefore, there is now a need on a national scale to raise awareness of the character of industrial design activity, and its role within the product development process, among industrial managers.

The Industrial Development Agency (IDA) saw industrial design support, for new product development, as a follow up activity limited to enterprises previously assisted in the UK/UNIDO Industrial Restructuring programme.

Accordingly UNIDO suggested a pilot project which built on existing activities under the EC's TEMPUS Project in Management of New Product Development between Manchester Metropolitan University and Faculties of Industrial Design at Warsaw and Krakow Academies of Fine Art.

The contractors approach was based on the fact that industrial design activities have matured within free-market economies to become powerful tools for successful product development. Industrial design is no longer the application of "style", but a means of guiding a multi-disciplinary team to ensure that all aspects of a product are developed simultaneously. Practised well, it can give organisations a confidence in the management of change, and thus greater willingness to develop product and market opportunities.

After further discussion with UNIDO it was thought to be unnecessary or inadvisable to limit the project to enterprises involved in the UK/UNIDO Industrial Restructuring programme. A much greater transfer of Know How could be achieved by involving a wider audience.

Consequently, activities were directed to a widely publicised Symposium in Warsaw, a 3 day Workshop event, and visits to individual enterprises. The activities met with success, though Polish scepticism of market-driven new product development will take some time to overcome fully.

Recognising that a long term approach would be necessary to fully redress the scepticism, discussions were held in Krakow about the feasibility of founding a permanent regional Centre to assist enterprises with their product development planning and implementation. The concept of regional centres for MNPD had been discussed within the TEMPUS programme, and Professor Jerzy Ginalski had been investigating the feasibility of such a centre for some time.

This initiative caused IDA to propose a further Seminar in Krakow to promote the concept of the Centre. This Seminar was successful in attracting wide publicity. The Centre has since attracted the support of the local authorities and the participation of other Academies and Universities. Its envisaged programme of assistance is being discussed by local industry, and has received much initial enthusiasm.

The following sections document the work which has brought about this achievement, and put forward further proposals.

3/ Work completed according to the Terms of Reference

The programme of Industrial Design support was originally conceived by the Industrial Development Agency and UNIDO as an additional service to be rendered to those enterprises which had received assistance under the UNIDO/UK Restructuring Project. Those enterprises were selected whose business was in the manufacture of goods where success in a market economy would depend on identification and implementation of successful product design strategies.

Within the small budget available, direct assistance in actual product development consultancy would not be practical. Therefore, it was recognised that attention should be concentrated on raising the awareness of industrialists, government, and consultants from all relevant disciplines of the value of appropriate product development strategies.

A three-part programme was agreed upon, comprising a high-profile Seminar or Symposium, to draw attention to the subject from a wide audience, a 3-day Workshop event for industrialists, and design professionals and academics, to illustrate the techniques of management of product development in more detail, with one- or two-day factory visits to demonstrate the technique in practice.

The Terms of Reference issued with the Contract for this Project (APPENDIX 1) accordingly set out a work programme in its Section D, to achieve the above. Following is work completed against this programme:

- 3.1 Section D (i) - study reports pertaining to the UK/UNIDO Restructuring Project. Three reports were forthcoming, and these were studied in detail.
- 3.2 Section D (ii) - Prepare and send a questionnaire and an outline of the proposed input to the enterprises covered by the Project. This had to be abandoned due to resistance from the Polish Ministry of Industry and Trade to the form of the questionnaire. The Warsaw Workshop participants were asked to provide a written response to this experience. See Interim Report No.2.
- 3.3 Section D (iii) - Prepare a draft outline of the Workshop content based on the findings of (i) and (ii) above. This accompanied the Interim Report as an appendix.
- 3.4 Section D (iv) - Conduct a three day Workshop. This was done at the Faculty of Industrial Design of Warsaw Academy of Fine Arts, from Saturday 25th February to Monday 27th February 1995. Two industrial enterprises were represented, and these were not UK/UNIDO restructuring project recipients. However, 14 industrial design professionals and academics attended, and the Workshop content was adapted to train these in running such an event, and in detailed assistance to the industrial delegates as practical examples.
- 3.5 Section D (v) - Prepare a programme for the Symposium. This was completed in January 1995.
- 3.6 Paragraph (vi) - Conduct a One Day Symposium. This was held successfully on March 1st, with an attendance of approximately 100 people.

Of these, 65 signed the visitor's list, and 25 industrial enterprises were represented on this list, including many of the UK/UNIDO Restructuring scheme companies.

The event attracted media attention, with several TV, radio and press representatives attending. Prof. Wojciech Wybieralski, of Warsaw Academy of Fine Art, School of Industrial Design, gave 4 television interviews on the subject.

4/ Limitations encountered

4.1 The Budget

The budget allocated, \$19,000, was a sum remaining at the end of a major restructuring project supervised by UNIDO. Within this budget, it was recognised that even one programme of assistance with actual product development to one enterprise would be difficult. Therefore, effort was to be directed towards activities to raise awareness of the subject across as wide a field of relevant authorities and potential beneficiaries as possible.

4.2 Attendance of industrial delegates at the Workshop/training events

Initially, confidence was high from UNIDO/UK sources, and from Industrial Development Agency, that industrialists would value an introduction to this new development discipline.

The Warsaw Workshop was scheduled over a weekend to allow busy managers to demonstrate definite interest by attending partly in their own time. This proved to be ill-advised, and attendance was poor. It became evident to the trainers, and to the IDA, that the main component of the planned programme would have to be awareness raising for Polish industrialists regarding the need for long-term co-ordinated product development strategies, concurrently with short-term reaction on an individual product-by-product basis to the demands of the market.

The attitude of industrialists to the value of a one- or two-day visit from the UK trainers could now be better understood, since they were assuming that product design advice would be offered, and believed that two days were insufficient for this to be delivered. The need to widen awareness that these visits were to help enterprises identify strategic design needs was therefore identified as one of the principal aims of the rest of the Project.

4.3 Understanding of Management of New Product Development techniques by industrial design professionals and academics.

Very good understanding of the necessary techniques was evidenced by many industrial design professionals and academics, especially those who had taken an active part in the EC TEMPUS Project, "Management of New Product Development" with Manchester Metropolitan University and the National College of Art and Design, Dublin. Principal among these were Grzegorz Niwinski and Michal Stefanowski of MIMO Design, Warsaw, whose practice and teaching have been informed through the TEMPUS programme to study, and Prof. Jerzy Ginalski of Krakow Academy of Fine Art. Prof. Ginalski and his assistants Marek Liskiewicz and Janusz Seweryn, have jointly published a textbook in Polish on the subject. (Cover and acknowledgements attached at APPENDIX 2).

Not all practitioners were so aware, and none were experienced in presenting the subject to industrialists, or of applying the techniques in a practical industrial situation. It was therefore noted that they would need further training and guidance than was possible under the present Project, and that this would be brought to the attention of Polish Government and academic authorities, and further proposals made.

5/ Action to overcome limitations

5.1 Warsaw Workshop

As mentioned in section 4, at the Warsaw Workshop, there were 2 industrial enterprises represented and 14 delegates from design education and professional product design consultancies. The tactics were therefore changed from broad training of enterprise management to instruction in the techniques of holding such an event, as well as giving the industrial delegates individual attention in "surgery" consultations, again giving the local professionals and academics experience of rendering this assistance in practice.

The Warsaw Workshop training material was translated into Polish for use during the Workshop, and has become a valuable document for the Polish trainers and professionals who attended. They should now be able to run short courses for industry.

The event was successful in transfer of training know how to the Polish professionals who took part in the activities, and in detail advice for the enterprise management who attended. Douglas Barham visited the factory of Pruszkow Porcelain Works, and a report on this visit and his recommendations was appended to our Interim Report No.2.

Some specific outcomes were:

(a) Detailed advice for the attending enterprises - a Mission Statement and a new product development strategic plan for the Pruszkow Porcelain Works

(b) SWOT Analysis for Krokus Projector factory and an outline strategy for the future management buy-out.

(c) Extensive "brainstorming" session on the often conflicting needs of industry, professional consultancy and education in industrial design and product development, and the perceived obstructions to development. It is believed that this information, which is attached as APPENDIX 9, could be of use to the Ministries of Industry and Education.

5.2 Proposals to repeat the Workshop

It was initially proposed to repeat the Warsaw Workshop event at a later date, with the Polish design professionals who attended the first event delivering training and being supervised by one of the UK Trainers.

Furthermore, to fulfil the contractual obligations of the UK trainers to visit UK/UNIDO Restructuring Project enterprises, a return visit to Warsaw in mid-June was proposed, when the UK Trainers and Polish Co-trainers would spend two days at each of 5 or 6 such enterprises. This would give the IDA further time to arrange such visits.

5.3 Visit to Central Europe Trust

The two UK Trainers, Paul White and Douglas Barham, visited the offices of Central Europe Trust in Warsaw, who had been the main contractors for the delivery of the UK/UNIDO Restructuring Project to most of the recipient enterprises, and whose reports on 3 companies under this project the UK trainers had previously studied.

They met Mr. Adam Dyszynski and explained the strategy of the training, with special relevance to his own work in restructuring. It was observed that this often identified the need for product development, but could rarely offer practical assistance with its implementation. Mr. Dyszynski saw quickly the value of the product development training to bridge a gap between the recommendations made at the end of a typical restructuring project report and the briefing needs of designers and engineers, as a "Missing Link". This was noted as a future recommendation to Polish Government and restructuring funding agencies.

5.4 Possibility of foundation of a permanent Centre to teach and practise the techniques.

In the light of the identification of the need for a longer-term strategy to achieve fully the objectives of the Project, Paul White discussed the possibilities of foundation of a permanent Centre of New Product Development in Poland with Andrzej Kinel of the Industrial Development Agency, (IDA). The concept for such a Centre had originated within the TEMPUS Programme and had been further developed in the context of the Warsaw Symposium and discussions in 1994 with EXPROM and the IWP. Such a Centre would be able to educate and inform industry and consultants over an extended period, as well as rendering the multi-disciplinary assistance needed to implement successful product development. It would also serve to draw the attention of government to the benefits of properly managed product development. (See APPENDIX 4).

Mr. Kinel agreed that Poland needed a network of such centres, each attuned to the local economy of its region. His advice was to locate the first such Centre in the provinces, and to regard it as a potential pattern for such a network.

Krakow was proposed as the most suitable starting point because of the availability of relevant knowledge and facilities in the Academy of Fine Art there. During a visit to Krakow, Paul White attended meetings with Prof. Jerzy Ginalski of the Department of Industrial Design of Krakow Academy of Fine Art, and Dr. Leslaw Piecuch at the Krakow Academy of Economics. The meetings were in the context of long-standing discussions between these Academies.

Dr. Piecuch is Manager of the Free Enterprise Transition Centre, an office within the Academy of Economics funded and set up with the United States Peace Corps, and he offered co-operation and direct assistance towards the formation of a Product Development Centre for the Krakow Region. This was seen to be possible because of the expertise demonstrated within the present Project, and the previous EC TEMPUS Project in Management of New Product Development, which can be integrated with the Academy of Economics's own expertise in market economics, management and marketing.

Dr. Piecuch also confirmed the need for the "Missing Link" of Product Development strategy in the re-structuring of Polish enterprises to meet the needs of the market economy.

5.5 Activities planned in Krakow

During the visit, the prospect of running the second Workshop in Krakow rather than Warsaw was discussed and agreed. It was further recommended by IDA that the Workshop should be specifically aimed at publicity for, and demonstration of, the assistance which would be offered by a New Product Centre.

After further consideration, it was the opinion of the IDA that greater benefit for the new Centre concept would be obtained from running another Symposium/conference event in Krakow, in conjunction with visits to enterprises in that area by the UK Consultants, and that the events should be postponed until September 1995, in order to give sufficient time for organisation.

All these revisions to the Project programme were fully discussed at all stages with IDA and UNIDO and implemented with their full agreement and support.

6/ Activities resulting from new information.

6.1 The Krakow Seminar

The Krakow Seminar was held on November 15th, 1995, under the title "Centrum Nowego Produktu" (New Product Centre). It was judged by all participants to be successful. A programme was written and published in English and Polish, which is attached as APPENDIX 3.

The Seminar was solely on the theme of the proposed Centre, and the various speakers from the Academies, local Government and Chambers of Trade, the British Embassy, and the UK trainers co-ordinated their deliveries to explain the concept and invite support. A synopsis of the papers presented is attached as APPENDIX 4.

A total of 70 people attended from local enterprises, local and national government, Academies and the press. The Bank of Industry and Trade wrote afterwards to express apologies for their absence and to pledge future support. There were two TV, and two radio interviews, during which the contribution of UNIDO and the UK Know How Fund were stressed, and three magazine interviews (Businessman, Architektura i biznes, and Inwestor & Dekorator). A full visitor list and analysis of attendance and visitor questionnaires is attached as APPENDIX 5.

Prof. Ginalska launched his new textbook "Roswoj Nowego Produktu" (New Product Development) at the Seminar. This will be invaluable as a central reference for the new Centre, based as it is on western knowledge acquired during the TEMPUS Programme. Full acknowledgement is given in it to the two UK trainers present in Krakow, Paul White and Douglas Barham, and the joint co-ordinator of the present Project at Manchester Metropolitan University, John Doyle, who was also the TEMPUS Project co-ordinator.

A delegate attended from the Ministry of Industry & Trade, Antoni Stolarek, Vice-director of the Department of Political and Economic Strategy. He requested further discussion regarding the Ministry's possible contribution to the Centre. Prof. Ginalska will follow this up.

6.2 Foundation of the Krakow Centre for New Products

Prior to the Seminar, a Letter of Intent had been written and signed by the Rectors of the Academies of Economic and Fine Art, and the President of the Krakow Regional Development Agency. This expresses their intent to support the foundation of a New Product Centre, and a copy, with English translation, is attached as APPENDIX 6.

The support of the Regional Development Agency is particularly encouraging, since this includes an offer to provide fully equipped office premises for the Centre at no cost, at first on a temporary basis, and later as part of an historic industrial complex which is planned to be renovated within an area designated as a site for a future exhibition/conference venue for the city.

Paul White of 7D paid a visit with Prof. Ginalska to Mr. Jacek Kolibski, the President of the Regional Development Agency, and visited with him the building which is proposed for the Centre. It dates from 1906, and was part of the Solvay chemical works. Prof. Ginalska will pass on the surveyor's report and initial designs for its conversion in a few weeks.

After the Seminar, further offers to become founding partners, particularly from local enterprises, have been received.

A Krakow design professional, Jakub Czekaj, of ProDesign Studio, offered to devote a portion of his time to supporting Prof. Ginalski in the organisation of the Centre, and expressed his interest in taking a part in its future management.

There remains the natural problem of insufficient number of qualified personnel with relevant experience to operate this Centre. This could be rectified through the continued presence of the UK trainers over an extended period to train an initial core group, who can operate the Centre's activities, and train others after them.

6.3 Enterprise visits

Appointments were arranged during the Seminar to visit Krakow enterprises. These visits would allow UK trainers to demonstrate some MNPD principles in the context of individual enterprise requirements, and allow focussed discussions with enterprise personnel with regard to the operational framework of the new Centre.

These visits were to:

6.31 KFAP SA., ul. G. Zapolskiej 38, Krakow 30-126

A company established in 1949, manufacturing industrial measuring instruments. Already using industrial design to a limited extent, they are very interested to extend and integrate their utilisation of local consultancy capability through the guidance of the new Centre.

They also have developed very useful skills in basic automation of manufacture, and would be enthusiastic to offer these and other of their precision manufacturing capabilities on a consulting or contract basis to other companies. They recognise the potential value of the Centre in managing such offers.

The factory is very under-utilised and the managers recognise their need for product development.

The UK trainers met among others Zbigniew Balis, Vice President, Technical and Development, Bohdan Poplawski, Vice President Trade and Marketing, and Tony Wilson. Mr. Wilson is Director of Investment of the Polish Privatisation Association of Kleinwort Benson, the owners of KFAP. Paul White will keep in touch with him, as it is possible that Kleinwort Benson may be willing to see the logic of investing in the Centre, to safeguard and promote the investment they have made in this company.

Copies of KFAP company literature and a more detailed report from Douglas Barham on this visit are attached as APPENDIX 7.

6.32 HSK Data Ltd, E. Godlwewskiego 14, 30-149 Krakow.

Manufacturers of smart card alarm systems, children's miniature motorised, ride-in cars and zippers. The company is part of the Zasada (Mercedes dealer) group of companies. The UK trainers met Mr. Marek Wysocki, General Manager. He was very enthusiastic about the Centre, particularly over its perceived ability to give unbiased advice about the right consultant or combination of consultants, and their qualifications and competence.

He looked forward to being able to participate fully in the activities of the Centre, and would have no objection to paying an extra fee to the Centre for its advice and management of consultants.

A more detailed report from Douglas Barham on this visit is attached as APPENDIX 8.

A copy of the concept proposal for the Centre was presented to both companies, and they both offered to submit a letter of comment on this within a few weeks.

Paul White is maintaining contact with Kleinwort Benson to explore sponsorship opportunities for the new Centre. They are open to further discussion regarding KFAP and the other companies in their portfolio.

C.4 Reinforcement of Academies future capabilities

Discussions have taken place concerning a further TEMPUS application in the area of "rapid prototyping", to be co-ordinated by Manchester Metropolitan University with the Academies of Fine Art, Warsaw and Krakow, as the partner institutions. If such an application were to be successful it would put in place an important service and greatly increase the contribution of Krakow Academy of Fine Art to the activities of the Centre.

Further discussions centred on an offer made by Westminster University, Faculty of Design Management, in the UK, to open discussions with educational institutions in Poland on two subjects. The first was identification of a partner in Poland to which could be transferred their existing MBA course in Design Management.

It is believed that an appropriate partner for the MBA Course might be the Academy of Economics in Krakow, and further discussion will take place with Dr. Leslaw Piecuch of the Academy of Economics when next he visits the UK.

It was also recommended that the existing links between Krakow Academy of Fine Art and Manchester should be maintained and strengthened, and that it would be good strategically if Westminster's offer of help in general could be directed to assist the next New Product Centres which were proposed to follow on the example of Krakow.

Thus action was initiated to put in place further training and support from the UK, via European funds, to strengthen future contributions of the two academic founding partners of the Krakow Centre, and initiate action to put in place knowledge which will support the establishment of a second Centre.

6.5 Research on future funding for the Centres

Following the Krakow event, a meeting was arranged between Mr. P. White and Mr. Radoslaw Czapski, PHARE Programme Officer, at the PHARE Central Offices in Warsaw to discuss the circumstances in which PHARE could offer support to the proposed Centre by meeting set-up expenses through the mechanisms of the Regional Development Agency.

Mr. Czapski recommended a number of his colleagues who should be consulted, in several areas, stating that the main problem was that the concept did not fit neatly into any one identified priority area, but overlapped several. These introductions will be followed up.

Mr. Czapski also said that, though it may be difficult at present for

PHARE to support the Centre directly, because of the Centre's cross-disciplinary activity, it may well be possible for the Programme to award the Centre some contracts, after it is established, and thus support it indirectly. He also requested strongly that he be kept informed of developments as they occur.

A further meeting took place at the British Council in Warsaw. Paul White left an information pack for the Director, Andrew Murray, who it was known would be in UK that week. Lengthy discussion with one of his assistants revealed that the proposed Centres would be of definite interest to the British Council, and they may well be able to assist in some capacity. Paul White will keep in touch with Mr. Murray and discuss the matter further.

6.6 Research into the possibility of a second Centre.

As mentioned at 5.4, it was the idea of Andrzej Kinel of the IDA that, if a permanent New Product Centre could be successfully established in Krakow, it should be seen as a pattern for a network of provincial Centres. These could best be based, in his opinion, on towns where the Know How Fund was already operating, or where there were existing schools of industrial design.

There are both of these in Gdansk, Lodz and Poznan. There is a school of industrial design in Wroclaw, and the KHF operates in Lublin.

Warsaw is regarded as a separate case, since it is the capital and the Institute of Industrial Design (IWP) is situated there. The Institute is still undecided as to whether they can co-operate in such a multi-disciplinary New Product Centre as planned for Krakow.

The IWP does not appear to have the resources to operate in the regions, and so our work there may not involve them, though they are fully aware of it, and it has their verbal approval. Two delegates from the IWP attended the Krakow Seminar.

Paul White arranged to visit one of the above proposed towns to carry out initial research into the possibility of creation of a second Centre, and on the advice of Professor Ginalski went to Gdansk, to hold talks with the School of Industrial Design.

Prof. Ginalski teaches industrial design for two days per month at the School of Fine Art in Lodz, and offered to open discussions with them.

Though not having the status of an Academy, as do Krakow and Warsaw, there is good quality work at Gdansk with a high content of practical engineering innovation. Not surprisingly, much of the work has marine content, and there is a school of "Ship Architecture", that is interior and superstructure design for craft from ocean going passenger ships to canal barges. The lecturer in this department, Zbigniew Wierzbicki, also works for a German/Polish consortium in the Conrad Shipyard building aluminium yachts up to 30 metres.

One product shown, an automatic unmanned air/sea rescue pick-up basket for helicopters, has been prototyped and field tested in the Baltic with great success, though is not produced through lack of resources. It is, however, patented since the School retains their own Patent Attorney.

The present activities in Krakow, and how they came about, were explained to the Dean, Prof. Jacek Popek, and the head of industrial design, Marek Sredniawa. Prof. Popek expressed his support for such an activity in Gdansk, and Mr. Sredniawa was nominated as the contact

for future discussion. He does not speak much English, however, and one of the younger lecturers, Jaroslaw Szymanski, will be the contact for him. Mr. Szymanski also runs his own design consultancy, and was the originator of the air/sea rescue basket whilst a final year student.

Also present at the meeting was Dr. Anna Podhajska, of Gdansk University, Department of Microbiology. She speaks excellent English, and is already involved in a Technology Transfer Centre and Business Incubator scheme, which she feels would be of mutual benefit to a New Product Centre. She is enthusiastic to co-operate with our activities.

The material from Westminster University was presented at Gdansk, and the staff were interested in pursuing a TEMPUS bid with them. Whilst Gdansk would probably not be a good partner for the MBA Design Management course, the Design for Change group at Westminster would find much material of interest to them there. They will be put in touch with each other.

7/ Achievement of overall objectives

The objectives stated in the terms of reference were as follows:

- 7.1 Enhance the awareness of the importance of industrial design, as part of the re-orientation of Polish industry (emerging from the planned economy) to a market oriented one.
- 7.2 Provide training on the formulation of product development strategies as well as the management of new product development programs in enterprises, taking into consideration the interaction between marketing, technology and industrial design.
- 7.3 (A further objective in technical assistance is the development of local consulting capability. In this regard, it is expected that Polish Academies and institutions engaged in industrial design related tasks be utilised to the extent possible.)

The objectives stated in our proposal document, from which the ToR objectives were extracted, read as follows:

- 7.4 To raise awareness of the need for industrial design, as part of the re-orientation of Polish industry from the former planned economies to a world trading market.
- 7.5 To raise understanding of the need for and advantages of successful product development strategies, and introduce best practice teaching of these strategies, with particular emphasis on management of the tactical interaction of marketing, technology and industrial design.
- 7.6 To assist the Ministry of Industry to plan a national system of industrial design education, effective support for Polish industrial designers and their appropriate use in manufacturing industry, and an efficient plan for mutual support between industrial design education and industry.
- 7.7 To prepare the ground for the establishment in Poland of a permanent professional product development assistance unit to ensure the continued evolution and application of objectives 1 to 3 above.

Assessment of achievement

The Warsaw Symposium and Krakow Seminar very successfully achieved the Terms of Reference (TOR) objective at 7.1 above, and our proposal objective at 7.4 above.

Between them, they generated some half-dozen television broadcasts, five radio broadcasts, seven or eight newspaper articles and three business magazine articles.

The audiences, totalling about 170 over the two events, were composed of enterprise management, academics, practising consultants, government and trade associations.

The Warsaw workshop and enterprise visit, and the visits to enterprises in Krakow very successfully met the TOR objective at 7.2 above, and our own proposal objective at 7.5 above. In addition, these events have transferred valuable know how to Polish trainers and consultants such that they should be able to begin to advise enterprise management in

these skills.

Since we have worked closely with the Academies of Fine Art, Faculties of Industrial Design in Warsaw and Krakow, the Institute of Industrial Design, and the Krakow Academy of Economics, the TOR further objective at 7.3 above has been very successfully achieved.

The extra objective in our proposal, which was not included in the TOR, at 7.7 above has been met very successfully through this work to support the foundation of the Krakow New Product Centre.

The development of the centre is being followed closely by IDA, and monitored by the Ministry of Industry, and local government in the form of the Voivodship and the Regional Development Agency are taking an active part.

All objectives have thus been successfully attained, and there has been progress with additional achievements, as summarised in section 8 following.

8/ Additional outcomes

- 8.1 There has been progress towards attaining in Krakow the first Regional Product Development Assistance Centre. Experience gained during the initial phase of this Centre is already proving to be valuable for future expansion of this initiative to other regions of Poland.

Objective 7.7, which was thought to be long term, and would need a great deal more work, training and additional funds, has been progressed in Krakow as a direct result of the present UNIDO Contract; building on earlier activities.

- 8.2 Initial research into further New Product Centres along the lines of the Krakow pattern.
- 8.3 Identification of the market-led product development training strategy as a potential "Missing Link" between the current restructuring strategies and realisation of these in manufactured products and services. Testing of this strategy in practical Polish conditions.
- 8.4 A contribution made to the debate on the future nature of industrial design practice and education in Poland.
- 8.5 Creation of a "critical mass" of informed interest within responsible bodies to assist future development of product development planning in Poland.
- 8.6 Augmentation of local consultancy training, and proposals to assist the creation of better conditions for future growth of a stronger professional Product Development and Industrial Design consulting sector in Poland.
- 8.7 Further opportunities created for training in Management of New Product Development for employees of industrial enterprises, with academic accreditation.
- 8.8 The possibility of ongoing access for enterprises to UK resources and knowledge/research in market-led product development, with a concern for environmental issues and energy efficiency.
- 8.9 Recommendations to expand this pilot project into a major national initiative, which will build on and augment other UNIDO, PHARE etc. initiatives.

9/ Conclusion and recommendations

General achievements

At the close of this pilot Project, the awareness of the potential of industrial design as a business tool for profit has been greatly increased in Polish government, both national and local, in industry and the professions of marketing, finance and engineering. In fact, a "critical mass" of informed opinion has been created by the Project. Through TV, radio and press publicity from the Symposium and Seminar, the subject has received a wide audience among the general public, the eventual consumers.

Understanding of the proper and effective use of industrial design in a multi-disciplinary, team working context has also been augmented among Polish industrial design practitioners and educationalists, building further on the knowledge put in place on the EC TEMPUS Project in Management of New Product Development.

Understanding of the nature and extent of Poland's problems on the part of the UK trainers has been greatly increased, and it is intended that this will be put to further use.

Problems identified

Some of Poland's problems are specific to an economy in transition from the centrally planned to the market-driven system, but many of her problems are no different to those pertaining in Western Europe, except in degree.

To summarise them:

- 9.1 Lack of guidance, and long term strategy from Government, to enable industrialists to plan effectively for product development, and insufficient provision of relevant and up-to-date trade statistics.
- 9.2 Poor understanding of integration of product development strategy into industry, wherein management has been constrained to see product design as a case-by-case one-off activity largely related to the engineering functions of the company, and divorced from marketing, financial and production strategy. The common compartmentalisation of enterprise management has often resulted in product development taking place without utilising valuable information which exists within other parts of the same company.
- 9.3 Poor communication within companies, and with external design consultants. A common reaction has been to deny designers information about the full business of the company, since this was held to be highly confidential and of no relevance to the product development activity.

This problem, coupled with generally poor industrial planning, leads to inadequate briefs to designers, and ultimately to unsuccessful products, which helps neither the enterprise's financial performance nor the reputation of industrial design in general and the individual consultant in particular.

- 9.4 Exacerbating 9.3 above, there is a lack of professional codes of conduct covering business ethics and confidentiality in the product design profession. Nor does there appear to be an impartial source of reference to quantify design consultant's professional competence and quality of experience work.

The product design consultancy sector is a vital component for the future of Poland's manufacturing industry, as the small-to-medium enterprises, upon which the bulk of the prediction for economic growth is based, are in general too small to employ their own full-time specialist teams.

- 9.5 There is no lack of innovative industrial design talent and capability in Poland. What is lacking is the understanding and experience, both on the part of industrial clients and the designers themselves, of the means to apply that talent efficiently and effectively to the economic needs of Poland, particularly in import substitution and export, to better secure the financial health of the enterprise and the nation.
- 9.6 The present structure and content of education for industrial designers has been improved by the EC TEMPUS Project, but many problems remain in the Academic institutions. These were detailed in an annex to Interim Report No.2, and are attached to this report as APPENDIX 9.

In brief, low staff pay leads to lecturers working part time in the Academies, and part time as professional consultants. Though no bad thing in itself, it leads to quasi consultancies being set up within Academies, which may not perform as a truly professional consultancy should. This could undervalue the profession in the eyes of industry, and does not encourage it to take industrial design seriously as a vital business tool.

These quasi consultancies, subsidised as they are by lower overheads and cheap or even free access to equipment constitute unfair competition to fully professional operations and could stifle the growth of the independent consultancy sector.

- 9.7 It has become apparent through talking to several practitioners involved with the restructuring of enterprises, and studying their reports, that in many cases, a recommendation is made that an enterprise needs to develop new products, improve existing ones, or adapt them for new markets. Within the present structure of the consultancies carrying out this work, there is little or no capability to assist the client enterprise to implement those recommendations into saleable products, or to extract a brief from the study which would be meaningful for an industrial or engineering designer. There is a "missing link".

Recommendations

Some of the above observations are beyond the scope of the present project or its authors to address, since they involve national policy. They will be borne in mind through future work.

Others are capable of more straightforward resolution.

- 9.8 Due to the strategy to establish a regional New Product Centre, many of the problems at 9.1 above can be circumvented. As has been demonstrated, positive, practical support has been offered to the Krakow Centre by the Municipal and Regional Authorities, who also have a part responsibility for economic planning and industrial development of the region.

It is envisaged that one such Centre operating successfully will draw the attention of central government. The Centres will, under the present conditions, begin as independent units, but eventually some degree of connection must be established between them, to ensure exchange of experience, information and databases of available expertise, and

commonality of operation and standards.

The above co-ordination will create a national pattern. A degree of autonomy and flexibility will be desirable to maintain the focus of each Centre on the needs of its particular Region. The balance must be found as part of the programme of their development.

- 9.9 The problems of enterprise management practice outlined at 9.2 and 9.3 above, and the further training needs of product design consultants at 9.4 and 9.5 above need long term attention, though a start has been made to this under the present Project.

The problems of neither group are capable of proper resolution without the committed co-operation of the other. The Centre concept gives a "neutral ground" on which both groups can meet and work out common solutions, and within which extended training for both, and guided practice of correct strategies can take place. It is essential, therefore, that a New Product Centre have the trust of all participants, and be seen as fair, impartial and competent. It must also demonstrate effectively that it can provide a service which achieves results which are impossible for consultants working alone, or enterprises with their own staff, to equal.

An essential part of the Centre's activities will be the maintenance of a database of consultant's qualifications and experience. Registration of the consultant with the Centre, and the maintenance of that registration, should go a long way towards ensuring quality control of consultant's work, and therefore to establishing greater confidence in manufacturers to use their services.

- 9.10 It is essential that any envisaged New Product Centres are organisationally and physically separate from the Academies.

The Academies will, through the Centre, have the opportunity to develop and market specialised courses for industrial managers, with academic accreditation. These courses would bear commercial rate fees and would help the Academies financially, with definite benefits for both staff and students.

The establishment of the Centre, and its registration scheme for consultants, should also ensure that academic "consultancies" operate on a fully professional basis.

- 9.11 The Centre would also be able to recommend personnel able to provide the "missing link" outlined at 9.7 above between restructuring work and the emergence of new products, and ensure that attention is paid at an earlier stage in such restructuring work to the strategic value of correct management of product development.

9.12 Conclusion

The project has been very successful, achieving its stated objectives, plus extra achievements not thought possible within the limitations of time and budget at the commencement of the Project.

A deeper overall understanding of the detailed problems concerning product development in Poland through the more effective use of industrial design has been gained by all participants in the Project, and a solution proposed and part implemented in the New Product Centre in Krakow. Because of this success, it is the intention of the UK consultants to propose further work.

In particular, further application of UK expertise will be vital if the New Product Centre in Krakow is to achieve its full promise, and to act as a successful pattern for a national network. This expertise, with the benefit of UK experience of the problems and opportunities of the market economy, will be needed to guide operational and policy decisions and in training of the Centre's first personnel.

The UK, and the UK Know How Fund with UNIDO, has received good value from this pilot Project, in terms of progress and international goodwill. The already high reputation in Poland of the MMU initiative and personnel and UK industrial design professionals has been augmented, and will be further so if our involvement in the new Centres is maintained.

18th February 1996

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Paul White

TERMS OF REFERENCE FOR

A WORKSHOP/SYMPIOSIUM ON INDUSTRIAL DESIGN
AND THE MANAGEMENT OF NEW PRODUCT DEVELOPMENT
UK/UNIDO RESTRUCTURING PROJECT IN POLAND

A. Background and General considerations

Emerging from the political and social changes occurring in the late 1980's, the Government of Poland embarked upon a strategy aimed at orienting the industrial sector towards the realities of a market economy. Restructuring industrial enterprises to operate in a commercial manner is a key objective of the policies being pursued. Emerging from a long tradition of central planning and product-led manufacturing, the change over was a difficult one. The required expertise and know how in enterprise restructuring and modern management skills were in short supply. External assistance has been rendered to the government to facilitate the gradual transformation of the industrial sector.

A major restructuring project covering direct assistance to 15 large enterprises was carried out by UNIDO, with the funding made available by the U.K. Know How Fund for Poland. The project carried out diagnostics at enterprises and formulated appropriate restructuring strategies. In addition, assistance was rendered in marketing, cost accounting, management training and the like. As a result of the assistance, these companies have been successfully restructured to compete effectively in the market economy and positive commercial results are now emerging.

In the product-led background under which these enterprises operated in the past, coupled with frequent product shortages and the absence of competition; the importance of product design was neglected. For the efforts being made to restructure these companies to compete in the market economy to be fruitful, training on areas such as new product development and industrial design is essential.

B. Objectives

1. Enhance the awareness of the importance of industrial design, as a part of the re-orientation of Polish industry (emerging from the planned economy) to a market oriented one.
2. Provide training on the formulation of product development strategies as well as the management of new product development programs in enterprises, taking into consideration the interaction between marketing, technology and industrial design.

(A further objective in technical assistance is the development of local consulting capability. In this regard, it is expected that Polish academies and institutions engaged in industrial design related tasks be utilised to the extent possible.)

C Manpower Inputs and Schedule

It is estimated that approximately two man months of work would be required to provide the input, by a team consisting of both UK and Polish consultants. (One of the objectives of the UK/UNIDO project was the training of Polish consultants)

The inputs would cover a three day workshop on industrial design and a one day symposium. About 0.5 m/m of the total input would be utilised for preparatory work, at the sub-contractor's office.

The workshop and the seminar should be completed within three months of the award of contract. The dates and the venue should be decided jointly by UNIDO and Polish authorities.

The contractor should utilise the facilities and expertise related to the project available in academic and other institutions in Poland. The contractor is solely responsible for ensuring that adequate cooperation from such partners is ensured as well as maintaining the quality of their work. The bid-document should provide information on all such sub-contractors, and the inputs to be provided by them.

D. Proposed Work Programme

- i Study the reports pertaining to the UK/UNIDO restructuring projects, in order to obtain an overview of the enterprise background, products, markets and restructuring strategies pursued.
- ii Prepare and send a questionnaire and an outline of the proposed input to the enterprises covered by the project, in order to gather information on the industrial design function at the enterprises as well as to identify suitable course participants.
- iii Based on the findings of (i) and (ii) above, prepare a draft outline for the Workshop and obtain UNIDO clearance for the programme.
- iv Conduct a three day workshop in Warsaw, for 20-30 participants drawn from the enterprises, relevant training institutes, on industrial design and the management of new product development.
- v Based on the consultant assessment of industrial design related issues in Poland and with due consultation with other related institutions concerned, prepare the program for the symposium and obtain UNIDO clearance.
- vi Conduct a one day symposium for 100-150 participants from enterprises and Polish Government institutions.

- vii Based on the observations made, prepare a report identifying industrial design support needs in the enterprises and further technical assistance needs.

The contractor is responsible for liaising with the relevant Polish institutions and finalising the arrangements for the workshop and the symposium.

E General Time Schedule and Reports

It is estimated that the initial work on the project would start around end December 1994. The three day workshop is planned to be held during the period 23 -28 February 1995 and the Symposium on 1 March 1995.

F Working Language

While the working language of the contractor and the reports should be in English, the Workshop and the Symposium is to be conducted in Polish. Arrangements should be made with the local sub-contractor to ensure that translations are made.

G Report and Evaluation

After the assessment of the enterprise restructuring programs and the situation in Poland, the contractor would submit to UNIDO the initial assessment of needs as well as the outline programme for the three day Workshop and the Symposium.

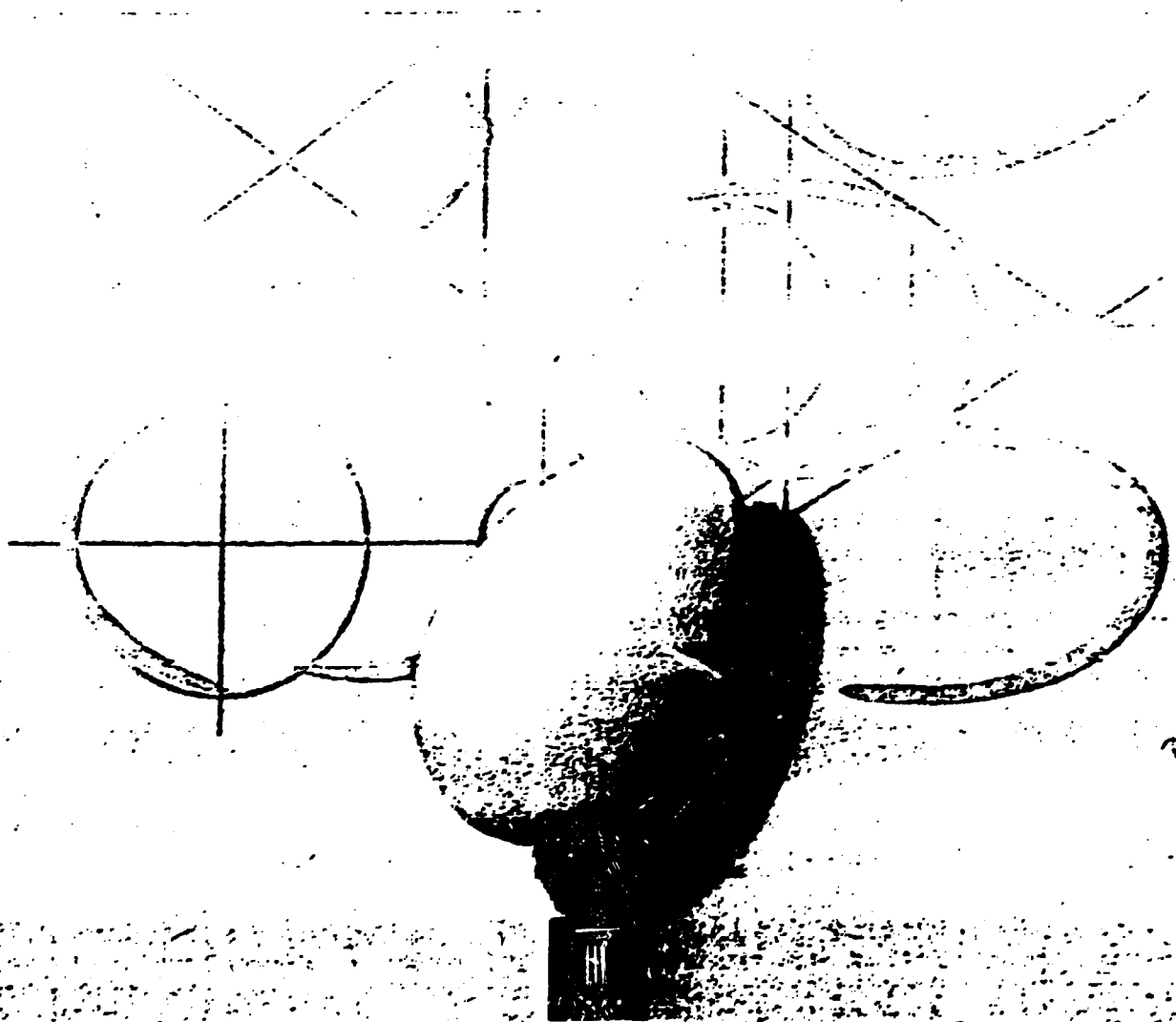
A questionnaire should be handed over to Workshop participants to assess their views on the usefulness of the work shop and identifying further technical assistance needs. The analysis of the questionnaire responses should be incorporated in to a brief report on the work shop.

At the end of the work, the contractor will submit a report outlining activities pursued, achievements, constraints faced and suggestions for further work.

APPENDIX 2

J. Ginalski M. Lisiewicz J. Seweryn

ROZWÓJ NOWEGO PRODUKTU



AKADEMIA SZTUK PIĘKNYCH W KRAKOWIE - WYDZIAŁ FORM PRZEMYSŁOWYCH

PODZIĘKOWANIA

Autorzy w tym miejscu pragną wyrazić wdzięczność wielu osobom, które przyczyniły się do powstania tej pracy. W pierwszym rzędzie podziękowania należą się Panu Johnowi Doyle, starszemu wykładowcy Manchester Metropolitan University, który był inicjatorem i koordynatorem Wspólnego Projektu Europejskiego. Jego przede wszystkim dziełem był program projektu i określenie merytorycznej zawartości nowego przedmiotu studiów „Rozwój nowego produktu”. Jego pomocy i cennym wskazówkom autorzy zawdzięczają dobór źródeł, a także zrozumienie wielu problemów, z którymi przyszło im spotkać się w czasie studiowania tego nowego obszaru wiedzy. John będzie także dla nas nieodścisłym wzorem precyzji formułowania myśli. Także Pan Paul White, projektant i właściciel prywatnego biura projektowego 7D Design w Bamsley i współinicjator JEP, zasłużył sobie na wdzięczność autorów za rzeczowe uwagi jakich udzielił w licznych rozmowach oraz za umożliwienie zapoznania się z dokumentacją, jaką posługuje się on w swojej praktyce konsultanta rozwoju nowego produktu.

Szczególne podziękowania autorzy wyrażają Panu Douglasowi Barham, wykładowcy Manchester Metropolitan University, za to, czego nauczyli się uczestnicząc w znakomicie prowadzonych przez niego wspólnie z Panem Johnem Doyle i Panem Collinem Melrose warsztatach Design Management'u oraz za nieocenioną pomoc w poznawaniu wielu problemów jakiej udzielał nam w oparciu o swoje doświadczenia płynące z wieloletniej praktyki konsultanta Design Council.

Autorzy z wdzięcznością wspominają Pana Paula Fortune, kierownika szkoły wzornictwa przemysłowego w National College of Art and Design w Dublinie, za jego ciepły stosunek do pedagogów i studentów z Polski i pełne realizmu, bardzo rzeczowe wskazówki w wielu kwestiach praktycznych związanych z rozwojem nowego produktu. Podobną wdzięczność czują autorzy dla zmarłego dwa lata temu Pana Paula Callaghana, kierownika szkoły wzornictwa przemysłowego w Manchester Metropolitan University. Choć nie brał on bezpośredniego udziału w JEP, możliwość obcowania z nim, a zwłaszcza obserwowania jego ojcrwskiego stosunku do studentów, była bardzo pouczająca.

Wdzięczność autorów należy się również wszystkim wykładowcom Manchester Metropolitan University, National College of Art and Design a także wielu innych uczelni brytyjskich, których wystąpień mieli okazję słuchać lub uczestniczyć w prowadzonych przez nich warsztatach, kursach i seminariach.

Autorzy nie zapominają również podziękować tym osobom z naszego grona, które szczególnie przyczyniły się do zaistnienia, a następnie skutecznego przebiegu projektu, a mianowicie byłym dziekanom Wydziału Form Przemysłowych, Panu Prof. Adamowi Gedliczce, który w gruncie rzeczy był współinicjatorem JEP, oraz Panu Prof. Władysławowi Plucie, którego przychylność ułatwiała pokonywanie trudności rozruchowych projektu.

ACKNOWLEDGEMENTS

Authors would like to express their gratitude to many persons who contributed to this book. First of all we express our thanks to Mr John Doyle, senior lecturer in the Manchester Metropolitan University, who was initiator and co-ordinator of the TEMPUS Joint European Project. He deserves the credit for the programme of the JEP and the essential contents of new study subject New Product Development to great extent followed his advises. Authors owe to his help and valuable instructions the selection of sources and understanding of many problems of this new area of knowledge. We will remember John as the matchless paragon of precise formulation of thoughts. Also Mr Paul White, a designer and the owner of 7D Design Consultancy in Barnsley, merited for authors' gratitude for his objective directions given us in many discussions and for enabling us to acknowledge with and follow the documents he used in his practice as a consultant on management of new product development.

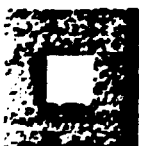
A particular gratefulness we express to Mr Douglas Barham, lecturer in the Manchester Metropolitan University, for all we learned participating in design management workshops he brilliantly run together with Mr John Doyle and Mr Collin Melrose and for the priceless help in studying these problems, help based on expertise that he had deserved from his long practise as a consultant of the Design Council.

Authors remember with thankfulness Mr Paul Fortune, head of industrial design school at the National College of Art and Design in Dublin for his friendly relation with Polish teachers and students and for full of realism directions in various practical questions on management of new product development we received. We feel similar gratitude to the late Mr Paul Callaghan, head of industrial design school at the Manchester Metropolitan University. Although he directly did not take part in the JEP, a possibility of intercourse with him, and especially a possibility of observation of his fatherly relation to students was very instructive.

We thank all professors of the Manchester Metropolitan University, the National College of Art and Design in Dublin as well as other British universities, whose lectures and seminars we had opportunity to attend.

Authors do not forget to thank those persons of our Academy, who particularly helped in coming into being and effective run of the mentioned JEP, namely two former deans of the Faculty of Industrial Design: Prof. Adam Gedliczka, who in fact was co-initiator of the project, and Prof. Wladyslaw Pluta, whose friendly attitude made it easier to overcome difficulties in the project development.

MARKETING	KADRY	FINANSE
WZORNICTWO PRZEMYSŁOWE	DESIGN MANAGEMENT	KONSTRUKCJA TECHNOLOGIA
OCHRONA PRAWNA	PRODUKCJA	SPRZEDAŻ



Centrum Nowego Produktu

ul. Chłodnia, 10, 00-611 Warszawa



Centrum Nowego Produktu

Wydział Form Przemysłowych Akademii Sztuk Pięknych, ul. Smoleńsk 9, 31-108 Kraków Tel/fax 48 [12] 223444

Przewodniczący sesji: Pan Piotr Bożyk, Prodziekan Wydziału Form Przemysłowych ASP

- 10:00 Otwarcie Seminarium
Prof. Włodzimierz Kunz, Rektor ASP
- 10:10 Krakowskie środowisko akademickie wobec potrzeb rozwoju gospodarczego
Prof. dr hab. Jerzy Mikułowski Pomorski, Rektor AE
- 10:20 Wzornictwo przemysłowe w Polsce. Rozwój i stan dzisiejszy
Prof. Barbara Suszczyńska-Rapalska, dziekan WFP ASP
- 10:40 Brytyjskie zaangażowanie w pomoc w przekształceniach gospodarczych w Polsce.
Wspólne działania Funduszu Know-How i UNIDG
Pani Patricia O'Donnell, Sekretarz Ambasady Wielkiej Brytanii
- 11:00 Potrzeby wspomaganie rozwoju nowego produktu w okresie przekształceń gospodarczych
Pan Paul White, 7D Product Development Consultancy, Barnsley, Wielka Brytania
- 11:20 Brytyjskie doświadczenia w kierowaniu rozwojem nowego produktu
Pan Douglas Barham, Manchester Metropolitan University, Wielka Brytania
- 11:40 Transfer europejskich doświadczeń. Wspólny Projekt Europejski w ramach Programu Unii Europejskiej TEMPUS "Szkolenie w zakresie kierowania rozwojem nowego produktu"
Prof. Wojciech Wybieralski, Wydział Wzornictwa Przemysłowego ASP w Warszawie
- 12:00 Sukcesy projektowania i rozwoju nowego produktu
Pan Janusz Konaszewski, Meyer-Hayoz Design Engineering AG, Winterthur, Szwajcaria
- 12:20 Pokaz realizacji krakowskich zespołów projektowych
- Prezentacja realizacji foteli samochodowych zaprojektowanych przez Firmę TRIADA
Marek Liskiewicz, Stanisław Półtorak, Marek Suchowiak
 - Wystawa produktów firm projektowych i projektantów w galerii "Schody"
W trakcie prezentacji będzie czynny bufet
- 13:00 Poparcie władz regionu krakowskiego dla inicjatyw rozwoju regionalnego
Pan Jerzy Miller, Vice-Wojewoda
- 13:10 Działania promocyjne Agencji Rozwoju Regionu Krakowskiego
Pan Jacek Kolibski, Prezes Agencji Rozwoju Regionu Krakowskiego
- 13:20 Potrzeby profesjonalnego wspomaganie rozwoju krakowskich przedsiębiorstw produkcyjnych
Pan Andrzej Zdebski, Dyrektor Izby Przemysłowo-Handlowej w Krakowie
- 13:30 Projekt utworzenia Centrum Wspomaganie Rozwoju Produktu w Krakowie
Prof. dr inż. J.Ginalski, Wydział Form Przemysłowych ASP
- 13:50 Propozycja wniosku do Brytyjskiego Funduszu Know-How o dofinansowanie Centrum
Pan Paul White, 7D Product Development Consultancy, Barnsley, Wielka Brytania
- 14:00 Przerwa
- 14:45 Sformułowanie wytycznych do finalizacji projektu utworzenia Centrum
- 15:00 Zakończenie Seminarium
- 17:00 Spotkanie robocze partnerów Centrum

CENTRUM NOWEGO PRODUKTU

Profesjonalny Ośrodek Wspomagania Rozwoju Nowego Produktu w Krakowie

Wprowadzenie. Pomimo kilku lat jakie upłynęły od zmiany systemu gospodarczego polskie przedsiębiorstwa nadal nie są przygotowane do działania w warunkach wolnego rynku. Wiele przedsiębiorstw produkcyjnych zmagają się z problemami finansowymi, z którymi nie są w stanie same sobie poradzić. Wielkie przedsiębiorstwa państwowe po utracie rynków wschodnich nie potrafią spożytkować posiadanego potencjału wytwórczego i grzęznąc w długach rozpraszają go wynajmując posiadane obiekty. Z kolei nowym, dopiero rozwijającym się, małym przedsiębiorstwom brak doświadczenia i środków do zdobycia stabilnej pozycji na rynku. Jednym i drugim potrzeba ekspansji na rynek światowy, a w tym celu potrzeba atrakcyjnych jakościowo i cenowo produktów, zdolnych do konkurencyjności z wytworami zachodnich i dalekowschodnich producentów.

Poprzedni system ze swą planową gospodarką nie sprzyjał stosowaniu technicznych innowacji i wzornictwa przemysłowego. Odziedziczony po nim brak umiejętności zarządzania ukierunkowanego na potrzeby rynkowe oraz niska świadomość roli wzornictwa jako stymulatora zysku są nadal mocną przeszkodą spowalniającą proces reorientacji przemysłu w kierunku światowego rynku. Obecnie producenci ze zdziwieniem stwierdzają, że odmiennie niż dawniej, główną trudnością nie jest produkcja lecz sprzedaż produktów.

Potrzeba skutecznych sposobów działania. Proces projektowania i rozwoju nowego produktu wymaga rozpoznania rynku i własnych możliwości przedsiębiorstwa, zaplanowania odpowiedniej strategii i umiejętnego kierowania procesem realizacji, aby nowy produkt mógł odnieść sukces i przynosić wytwórcy zysk. Ogromna większość polskich firm nie zdążyła jeszcze stworzyć mechanizmów strategicznego zarządzania działalnością innowacyjną. Tylko potężne organizacje przemysłowe mogą pozwolić sobie na posiadanie w swej strukturze wszystkich potrzebnych specjalistów. Nie są w stanie zaspokoić potrzeb dorywczo działający doradcy ani pracujący na zlecenie zewnętrzni projektanci. Konieczna jest więc pomoc przedsiębiorstwom w postaci kompleksowych usług i systemu szkolenia dla wytworzenia warunków skutecznego samodzielnego działania.

Centrum Wspomagania Rozwoju Produktu. Potrzebne jest utworzenie Centrum Wspomagania Rozwoju Produktu. Do najważniejszych zadań tego Centrum będzie należało:

- Świadczenie usług w zakresie marketingu, projektowania i kierowania rozwojem nowego produktu o różnym stopniu kompleksowości
- Szkolenie kierowniczej kadry przedsiębiorstw, która z kolei będzie mogła zdobytą wiedzę przekazywać innym pracownikom. Odmiennosc tego szkolenia od innych dotychczasowych kursów i studiów będzie polegała na integrowaniu wiedzy wszystkich dyscyplin biorących udział w rozwoju nowego produktu oraz na przekazywaniu tej wiedzy głównie poprzez rozwiązywanie rzeczywistych zadań przedsiębiorstwa
- Pomoc w uzyskiwaniu krajowych i zagranicznych źródeł finansowania zamierzeń innowacyjnych, w tym w opracowywaniu business planów i wniosków kredytowych.

Działalność Centrum Wspomagania Rozwoju Produktu będzie oparta na współdziałaniu ze specjalistami o najwyższych kwalifikacjach w dziedzinach zarządzania i organizacji, marketingu, wzornictwa przemysłowego, konstrukcji i technologii oraz ochrony własności przemysłowej i intelektualnej, z których większość zdobywała doświadczenie za granicą. Będzie to możliwe dzięki współpracy Centrum z Wydziałem Zarządzania i Marketingu Akademii Ekonomicznej, Wydziałem Form Przemysłowych Akademii Sztuk Pięknych, Wydziałem Mechanicznym Politechniki Krakowskiej i Międzyuczelnianym Instytutem Wynalazczości i Ochrony Własności Intelektualnej Uniwersytetu Jagiellońskiego.

Efekty. Spodziewane są następujące efekty działalności Centrum Wspomagania Rozwoju Produktu:

- Firmy korzystające z usług Centrum odniosą podwójną korzyść w postaci rozwiązania konkretnych problemów i podnoszenia kwalifikacji swojej kadry
- Dzięki zwiększaniu kompetencji kierownictw przedsiębiorstw zaistnieją warunki do samodzielnej restrukturyzacji
- Zaistnieją warunki do lepszego wykorzystania istniejącego potencjału przedsiębiorstw, zwiększenia zyskowności i minimalizacji ryzyka podejmowanych decyzji
- Nastąpi zmniejszenie ryzyka kredytowania przez banki przedsięwzięć produkcyjnych.

CENTRUM NOWEGO PRODUKTU

Profesjonalny Ośrodek Wspomagania Rozwoju Nowego Produktu
w Krakowie

PROMOCJA

PROMOCJA WZORNICTWA PRZEMYSŁOWEGO I KOMUNIKACJI WIZUALNEJ

- czasopismo, broszury
- plakaty
- wystawy, konkursy, prezentacje
- sieci projektowych
- wnioskach projektantów
- biur i zespołów
- przedsiębiorstw
- wybranych branż

PROMOCJA INNOWACJI TECHNICZNYCH I EKONOMICZNYCH

- wystawy
- prelekcje
- prezentacja innowacji
które odniosły sukces
rynkowy
- listy wynalazków/wzorów

USŁUGI

DESIGN MANAGEMENT

- wspomaganie skutecznego zarządzania w oparciu o nowe produkty
- opracowywanie strategii innowacyjnych
- kierowanie procesami rozwoju nowych produktów

USŁUGI FIRM PROJEKTOWYCH

- projekty wzornicze
- projekty konstrukcyjne
- projekty technologiczne
- projekty graficzne
- projekty wnętrz i wystaw
- projekty kompleksowe

USŁUGI FIRM MARKETINGOWYCH

- poszukiwanie niszy rynku
- badania pojemności rynku
- listy rynkowe
- projekty strategii

WSPÓŁPRACA z ZAGRANICĄ

- badanie obcych rynków
- wspólne projekty produktów
- wspólne przedsięwzięcia

DORADZTWO

- ochrona własności intelektualnej (patenty, wzory, prawo autorskie)
- ochrona konsumentów

EKSPERTYZY

- jakości wzorniczej
- ergonomiczne produktów i stanowisk pracy
- ekologiczne produktów (w pełnym cyklu życia)

USŁUGI POMOCNICZE

USŁUGI MODELARSKIE

- modele wyglądu
- modele działające
- prototypy

SKLEP SPECJALISTYCZNY

- narzędzia
- materiały
- technika komputerowa
- leasing sprzętu i oprogramowania

ROZNE

- fotografia
- animacja
- 24h on-line service
- pośrednictwo

EDUKACJA

KURSY SPECJALISTYCZNE

- kierowanie rozwojem nowego produktu (opracowaniem i wdrażaniem nowych produktów)
- marketing
- praca w programach DTP i CAD/CAM
- produkt ekologiczny
- modelowanie

STUDIA PODYPLOMOWE

- design management (zarządzanie przez innowacje, strategie innowacyjne, kierowanie procesami innowacyjnymi)
- studia interdyscyplinarne AE/ASP/PK

INTEGRACJA

INTEGRACJA ŚRODOWISK

- uczelnie/biznes/przemysł

INTEGRACJA W ŚRODOWISKACH

INFORMACJA

BANK DANYCH O USŁUGACH PROJEKTOWYCH

BANK DANYCH MATERIALOWYCH

BIBLIOTEKA SPECJALISTYCZNA

Opracowywanie strategii rozwojowych firm. Pomoc w uzyskaniu kredytów na prace rozwojowe
Opracowywanie kompleksowych projektów rozwojowych i profesjonalne kierowanie ich realizacją. Stopień kompletności opracowań do uzgodnienia ze zleceniodawcą

Wydawnictwa
Konferencje
Programy, materiały

Działania akwizycyjne
Agencja pośrednicząca
Zaopiniowanie i operacje wg zapotrzebowania

Współpraca uczelni
(kadra, lokale, aparatura):
Akademia Sztuki
Akademia Sztuk Pięknych
Politechnika Krakowska
Uniwersytet Jagielloński

Klub
Galeria wystawowa
Gala
Imprezy

Komputerowe bazy danych
- ICSIO
- CAD/CAM
- dane ergonomiczne

CENTRUM NOWEGO PRODUKTU

Profesjonalny Ośrodek Wspomagania Rozwoju Nowego Produktu
w Krakowie

Rada Fundatorów

ASP - WFP
AE - Biuro Programów Zagranicznych
UJ - MIWOWI
PK - ITMAP
Agencja Rozwoju Regionu Krakowskiego
Izba Przemysłowo-Handlowa
Banku (BWR BPH)

Rada Programowa

Delegaci Fundatorów
Zaproszeni eksperci

Zarząd

Rada Sponsorów

UNIDO
PHARE
Know-How Fund
Agencja Rozwoju Regionu Krak.

Public relations

Administracja

Finanse

Promocja
Wydawnictwa

Edukacja

Galeria

Sklep

Koordinator projektów

Konsultanci

Zewnętrzny
multidyscyplinarny
zespół projektowy

Zewnętrzny
multidyscyplinarny
zespół projektowy

Zewnętrzny
multidyscyplinarny
zespół projektowy

Eksperti

Profesjoniści zatrudniani i zespoły organizowane według potrzeb

MARKETING

HUMAN
RESOURCES

FINANCES

INDUSTRIAL
DESIGN

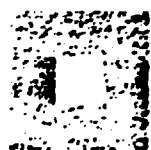
DESIGN
MANAGEMENT

ENGINEERING
DESIGN

LEGAL
PROTECTION

PRODUCTION

SALES



New Product Centre

Seminar, 15 November 1995, Kraków



Centrum Nowego Produktu

Centrum Nowego Produktu, ul. Smoleńsk 9, 31-108 Kraków

15 kwietnia 1993

Wydział Form Przemysłowych Akademii Sztuk Pięknych, ul. Smoleńsk 9, 31-108 Kraków Tel/fax 48 [12] 223444

Chairman: Mr Piotr Bożyk, Vice-Dean AFA Faculty of Industrial Design

- 10:00 Welcome**
Prof. Włodzimierz Kunz, Rector Academy of Fine Arts
- 10:10 The contribution of Cracow academic circles to economic development needs**
Prof. dr hab. Jerzy Mikułowski Pomorski, Rector Academy of Economics
- 10:20 Industrial design in Poland. Development and the present state**
Prof. Barbara Suszczyńska-Rapalska, Dean AFA Faculty of Industrial Design
- 10:40 British contribution to economic transformation in Poland. Joint activities of Know-How Fund and UNIDO**
Mrs Patricia O'Donnell, British Embassy representative
- 11:00 Needs for design management assistance in the transition period**
Mr Paul White, 7D Product Development Consultancy, Barnsley, UK
- 11:20 British experiences in Design and new product development management**
Mr Douglas Barham, Manchester Metropolitan University, UK
- 11:40 Transfer of European expertise. Joint European Project "Training in the Management of New Product Development" executed in the framework of the EU's Programme TEMPUS**
Prof. Wojciech Wybieralski, AFA Industrial Design Faculty, Warsaw
- 12:00 Successes of design and product development assistance for industry**
Mr Janusz Konaszewski, Meyer-Hayoz Design Engineering AG, Winterthur, Switzerland
- 12:20 Presentation of Cracow professional capabilities in industrial design**
- Car seats designed by TRIADA Design Company
Marek Liskiewicz, Stanisław Pótorak, Marek Suchowiak
 - Exhibition of the products designed by Cracow designers - "Schody" gallery
Coffee bar will be open during the presentation
- 13:00 Authority's activities for regional development**
Mr Jerzy Miller, Vice-Voivode
- 13:10 Promotional activities of the Agency of Cracow Region Development**
Mr Jacek Kolibski, President of the Agency of Cracow Region Development
- 13:20 Needs of professional assistance for manufacturing companies**
Mr Andrzej Zdebski, Cracow Chamber for Industry and Commerce
- 13:30 Centre for New Product Development project and development plan**
Prof. Dr Jerzy Ginalski, AFA
- 13:50 Proposal for Know How Fund assistance**
Mr Paul White, 7D Product Development Consultancy
- 14:00 Open discussion**
- 14:45 Finalising the proposal of the Centre for New Product Development**
- 15:00 Closing**
- 17:00 Working meeting of the Centre partners**

NEW PRODUCT CENTRE

Professional Assistance Centre for New Product Development, Cracow

Introduction

Despite the several years that have passed since the economic switch, Polish companies are not prepared to operate in a free market economy. Many firms struggle and cannot cope with financial difficulties. Big state owned companies, after the loss of Soviet markets, are not able to utilise their potential; sinking in debt they disperse that potential by leasing out buildings and machinery to other firms. New firms do not have enough experience to gain and keep a stable position in the market. All companies need expansion to Western markets and therefore they need new and attractive products, able to compete with those offered by the manufacturers of West-Europe and the Far East.

The former system with its command economy was unpropitious for technical innovations and industrial design. The old system left management unable to operate in a market driven economy, and with little awareness of design as a profit make; these are still strong impediments slowing down the re-orientation of industry to a world market. Now Polish producers are surprised to realise that it is much more difficult to sell than to manufacture products.

Need for effective activities

Design and product development need market research, an appropriate strategy and effective management to successfully launch new products and bring profit to the manufacturer. The majority of Polish firms have not built the mechanisms for the strategic management of innovations yet. Besides, only the most powerful industrial organisations can afford all of the necessary professionals in their structures. Occasional hiring of free-lance advisors and designers cannot solve the problem. Therefore, there is a need for assistance to companies in building their ability to act in a free-market environment; this need can be met via a provision of design and design management services and necessary knowledge.

Assistance Centre for New Product Development

There is a need for an Assistance Centre for New Product Development. Its main tasks will be the following:

- Services in marketing, design, and design management and industrial property protection
- Training in marketing and new product development for enterprises. This training will differ from other existing courses as it will integrate various disciplines involved in the process of new product development and will be based on real assignments
- Assistance in gaining local and foreign financial resources for innovative ventures, including the help in preparation of business plans and credit and loan applications

The Centre's activities will hinge on collaboration with the best professionals in management, marketing, industrial and engineering design, and technology and intellectual property protection, the majority of whom have acquired training and experience abroad. This will be assured by cooperation with the Faculty of Management of the Cracow Academy of Economics, the Faculty of Industrial Design of the Academy of Fine Arts, the Mechanical Faculty of the Technical University and the Inter-Universities Institute of Intellectual Property Protection of the Jagiellonian University.

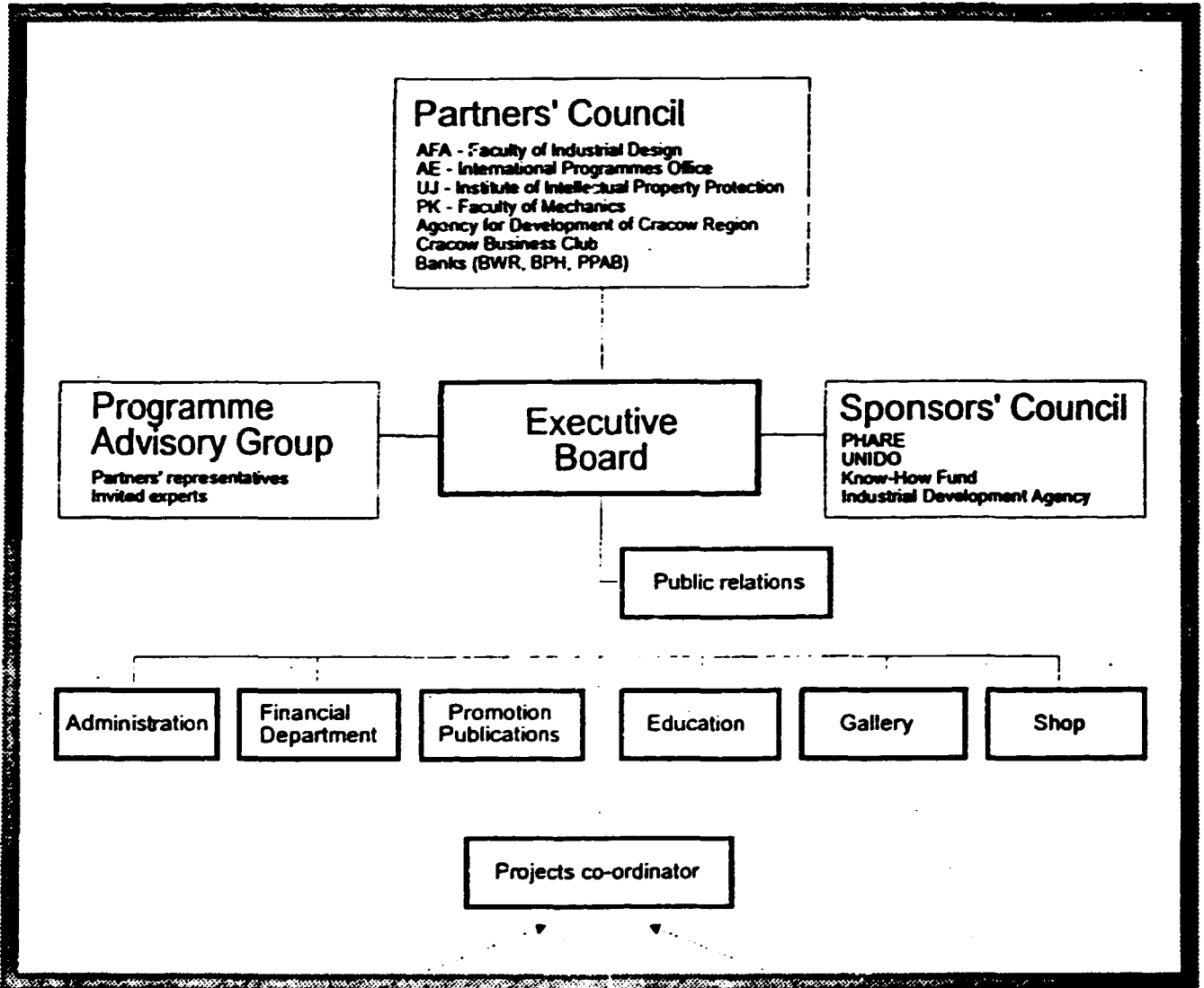
Effects

The following effects are expected:

- Companies will acquire double benefits by acquiring solutions to their real problems and by raising qualifications of their staff
- Thanks to a higher competence of the staff, the potential of companies will be better utilised, profit increased and risk of decisions minimised
- Companies will be better prepared for further development and restructurisation
- Bank loans may be more accessible as the risk of credits to companies will decrease.

NEW PRODUCT CENTRE

Professional Assistance Centre for New Product Development



NEW PRODUCT CENTRE

Professional Assistance Centre for New Product Development

PROMOTION	SERVICES	EDUCATION	INTEGRATION	INFORMATION
<p>PROMOTION of INDUSTRIAL DESIGN and VISUAL COMMUNICATION</p> <ul style="list-style-type: none"> - brochures, posters - exhibitions competitions - magazine presentations: - design ideas - famous designers - offices and teams - companies - industry branches <p>PROMOTION of TECHNICAL & ECONOMIC INNOVATIONS</p> <ul style="list-style-type: none"> - exhibitions - lectures - presentations of successful innovations - lists of patents 	<p>DESIGN MANAGEMENT SERVICES</p> <ul style="list-style-type: none"> - innovation strategies - project management <p>SERVICES OF MARKETING CONSULTANCIES</p> <ul style="list-style-type: none"> - market research - market tests <p>INTERNATIONAL CO-OPERATION</p> <ul style="list-style-type: none"> - assistance on foreign markets - joint projects <p>SERVICES OF DESIGN CONSULTANCIES</p> <ul style="list-style-type: none"> - industrial design - engineering design - production processes - graphic design - interior and exhibition - complex design <p>ADVISORY SERVICES</p> <ul style="list-style-type: none"> - intellectual property (patents, trademarks) - consumer protection <p>EXPERT REPORTS</p> <ul style="list-style-type: none"> - design quality - ergonomics (products and work space) - ecology (PLC) <p>OTHER SERVICES</p> <p>MODEL MAKING</p> <ul style="list-style-type: none"> - models - prototypes - batch production <p>DESIGNER SHOP</p> <ul style="list-style-type: none"> - tools, materials - CAD and DTP software - computer leasing (hardware and software) <p>MISCELLANEOUS</p> <ul style="list-style-type: none"> - photography - computer animation - CAD and DTP - 24h on-line service - design agency 	<p>COURSES</p> <ul style="list-style-type: none"> - design management - management of new product development - marketing - computation - DTP and CAD/CAM - ecological product - model making <p>POSTGRADUATE STUDIES</p> <ul style="list-style-type: none"> - design management - interdisciplinary combined studies - Academy of Economics + Academy of Fine Arts (Industrial Design) + Technical University (Technology) 	<p>INTEGRATION of CIRCLES</p> <ul style="list-style-type: none"> - universities/business/industry <p>IN-CIRCLES INTEGRATION</p>	<p>DESIGN SERVICES DATA BANK</p> <p>MATERIALS DATA BANK</p> <p>SPECIAL LIBRARY</p>

Innovation strategy assistance Business plans and applications for bank loans
 Complex innovation projects and professional project management Grade of completeness to be agreed according to need

Publications
 Conferences
 TV programmes

Soliciting
 Design agency
 Employing of freelancers
 according to need

Inter-university co-operation
 (resources venues,
 equipment)

- Academy of Economics
- Academy of Fine Arts
- Technical University
- Jagiellonian University

Club
 Gallery
 Balls and dances
 Other events

Computer data banks

- ICSID
- CAMPUS and others
- ergonomic data

Seminar on New Product Centre in Cracow
15 November 1995

MINUTES

Chairman Piotr Bożyk, Vice-Dean ID AFA

Prof. Włodzimierz Kunz, Rector AFA

Welcome and opening.

Presentation of the important position of the Academy of Fine Arts as the oldest Polish art school and the Faculty of Industrial Design as the oldest Polish design school in Cracow cultural landscape.

Prof. Dr hab. Jerzy Mikułowski Pomorski, Rector AE

Today initiation of New Product Centre is a natural consequence of previous contacts and co-operation between AFA and AE initiated by Prof. Ginalski and will stimulate the market development. These two institutions have common goals: high quality industrial products and the Centre will construct a bridge over existing gap between each other. Recent contacts with other countries (example of Egypt) suggest that new product development may result in profitable export contracts.

Krzysztof Görlich, Cracow Vice-President

Appreciation of the initiative of the New Product Centre. Powerful academic potential of Cracow should be utilised. Town authority is interested in economic development focused on manufacturing and selling products of high value added and in export of intellectual values. The Centre's programme is convergent with the Cracow policy. This idea perfectly meets the goals. Chance for success thanks to extensive international co-operation. This will help the process of European integration Poland is approaching now. The Centre will increase the competitiveness of Cracow town in Europe.

Centre's partners appropriately defined, but Cracow authorities express will to join the funders and expects that organisers formulate suggestion requests of its contribution. Contribution in cash and/or in kind (e.g. venue) and/or in organisational assistance can be taken in consideration and need further discussion.

Prof. Barbara Suszczyńska-Rapalska, Dean ID AFA

Industrial design as cultural and economic factor and a stimulator of better way of life versus mass culture and support in search for genuine values.

Roots of the Faculty in the beginning of century (Cracow Workshops). The oldest design school in Poland (1961) and long collaboration with ICSID (associate membership). International successes (example. two grand prizes in prestigious design competitions in Japan last year). Successful development of other design schools in Poland (Warsaw, Gdańsk, Poznań, Wrocław, Łódź).

Call for utilisation of local creative resources instead of import of foreign ready solutions. Let the word "development" related to the Centre will mean "progress".

Patricia O'Donnell, Secretary UK Embassy

Congratulations for all who initiated the Centre and contributed to the programme that will integrate skills of many professionals and will assist economic restructuring of Polish enterprises preparing them to operation on free market.

Credit to Mrs Thatcher for KHF initiative. Continuation of the KHF activities to help Poland in integration with the EU. The Centre will support the preparations for integration. Wishes of success.

Kazimierz Bujakowski, Director of Voivodship Office

On behalf the Voivode expressed support for the initiative. A strategy of regional development is being worked out by Voivodship Office. Academic contribution is considered the most important element of this strategy. Initiative of establishment of the Centre as interface between technology and real life is much appropriate. The Voivodship Office promises their support acting through the Agency for Cracow Region Development (Agency has been founded by the Voivode as a main partner).

Piotr Bożyk

Voivode's has already presented his positive attitude to design by financial contribution to the design competition being prepared now.

Paul White

See separate page at the conclusion of appendix 4

Douglas Barham

See separate page at the conclusion of appendix 4

Jerzy Mikułowski Pomorski

Mentioned a British design exhibition that was held in Cracow about 1960 to show that transfer of British know-how related to industrial design has long tradition.

Prof. Wojciech Wybieralski, ID AFA Warsaw

Idea of TEMPUS JEP "Training in the Management of New Product Development" was originated in UK. The project run from 1991 to 1994 with MMU as contractor and co-ordinator, NCAE Dublin, AFA Warsaw (partner co-ordinator W.Wybieralski) and AFA Cracow (partner co-ordinator J.Ginalski).

Training of teachers and students in UK, Ireland and in Poland by British and Irish trainers. JEP results implemented to curricula of both faculties. Important development of computer facilities (hardware and software) and literature. Currently an extension of the project in form of JEN. Re-trained designers better skilled to operate in free-market. Design attitude must constantly adapt to changing conditions.

Similar centre is being planned for Warsaw area next year

Janusz Komaszowski, Meyer-Hayoz Design Engineering, Winterthur, Switzerland
Slide presentation of works designed in first ten years of practice (in Poland) - mostly not realised in industrial production. Then next fifteen years that resulted in many successful consumer products and capital goods. Six years - Sulzer company, the rest as a partner of Wolfgang Meyer-Hayoz owning a private consultancy. Most products designed won prestigious prizes in international fairs or design awards.

Belief: Designer is paid to assure success of his employer. Designer always works in multidisciplinary team, taking various roles: a stylist, an architect, an inventor, a market researcher, a co-ordinator or manager. The team must precisely define the target and designer must accurately hit the mark. Monitoring of best competitors is necessary to know where they are and to predict what will be needed ahead enough. Following others results in 5-6 years delay. Role of concurrent engineering

Presented successful products: telephones (ASCOM), packaging machines (Schweizerische Industrie Gesellschaft) machines for textile industry (Sulzer), computers (Supercomputing Systems), printing machines (co-ordinated set of machines manufactured in several countries) medical equipment, etc.

Presentation of design work examples:

Car seats, halogen lighting, telephones, glass, electric carts, computer work stands, vacuum packagings, table lamps, bags, etc.

Jacek Kollbski, President of Agency for Cracow Region Development

Generally bad financial situation of Polish state owned and private companies. Institutional professional assistance may help manufacturers to act in free-market environment to get back the invested money in possibly short period, say 3 years. Business plan is always needed and the Centre will help in doing it professionally. Constant difficulty changing situation in terms of governmental policies, law and taxes - it's hard to foresee what will be in 5-6 years. The Centre will help to co-operate with foreign institutions and companies.

The Agency also supports the Cracow Business Promotion Centre. Both Centres should co-operate with each other

Declaration of support. First of all an offer for a venue: factory building (1906) remained after liquidation of the chemical factory (formerly Solvay).

Andrzej Zdebski, Director of Cracow Chamber of Industry and Trade

Activities of the Chamber are convergent with the Agency. The Chamber is 145 years old, 300 companies (mostly big), 90 000 employees. Old tradition in supporting progressive initiatives.

The Chamber offers contacts and sees the need for professional assistance. Quick progress of the West forces Polish industry to hasten development. The Chamber will help by special sessions/meetings to educate manufacturers how design and product development can stimulate companies' profits.

Piotr Bożyk

New products not always require big investments. Suggest to the Chamber or its members: to support also design competitions. Example of grand prizes won by a student in two Japanese prestigious competitions.

Prof. Jerzy Ginalski, ID AFA

Only few biggest industrial organisations can afford to employ permanently all mentioned by Mr Paul White 18 various specialists needed for successful product development. There is not a one of this kind in Cracow region. This is the basic idea of the Centre: to provide the complete integrated professional services to companies, hiring specialists when needed. The most important service: design management to utilise all resources for quick return of invested capital and high and sustainable profits. The Centre itself will not design but will help to solve problems of enterprises of the Cracow region. Promotion of design and innovation will be another important role of the Centre.

Cracow has best specialists of all needed professions but each profession acts separately. The Centre will integrate their skills. Competing with new products requires fewer investments than with manufacturing processes' innovations and thus is more appropriate for small and weak enterprises.

First three partners have already undersigned the document of intention to establish the Centre. They are AFA, AFA and Agency for Cracow Region Development. Appeal to others to join the list and to present opinions in open discussion to refine the basic project.

Paul White

See separate page at the conclusion of appendix 4

Open discussion

Janusz Konaszewski

Switzerland is not much different from Poland, people also hate spending money, particularly for risky ventures. Money should be spent effectively. It's obvious that every product must be ever replaced by another one; making trash costs about the same as making successful object. We should get rid of useless decency and should state the brave objectives: to be number one. We have professionals, industry, market, all we need, so let's utilise all for profit.

Piotr Bożyk

Time is the key. If we don't invest in brave initiative, we will more and more hand back behind the West

Confidence. The Centre must be fair in all aspects. Manufacturers have to trust that their moneys will be spent effectively and the Centre must assure it.

Andrzej Zdebaki

Polish reality: constant money shortage. Polish banks give credit for deposit (security) and not for venture business plan. High bank interest and uncertain legal situation. Education of business people is crucial but it is a long process.

Jerzy Ginalski

New Product need not be necessarily new new one. Incremental improvements require less investment. New product is the best way for development of small enterprises.

Prof. Dr hab. Lucjan Przybylski, Technical University

The Centre is continuation of previous co-operation initiated by Prof. Ginalski.

Incremental innovations are the majority of all innovations: bread can be better but we cannot imagine that may be replaced by something else. Everything can be better. Stress on quality is important way of development.

Douglas Barham

New product may mean a lower price, better service, etc. Advantages of incremental development rather than radical one if we want to maintain the current progress basing on existing opportunities. Decision radical or incremental is a vital question.

Call for Seminar mission. Personal proposal:

RE: Appendix 4 - Minutes of Conference
New Product Centre Seminar,
Krakow, 15 November 1995

Paul White

Contribution 1:

Brief overview of the contribution of industrial design and new product development strategy within the context of an industrial enterprise in the market economy. The multi-disciplinary nature of manufacturing business and the need for cross-disciplinary team work for effective product development, leading to significant market penetration, and good profit.

Contribution 2:

Brief history of the efforts to attract the interest of the international funding bodies to the subject, leading to the present UNIDO Project and the plans for the future with the Know How Fund and PHARE. Appeal for support of the delegates present.

CRACOW SYMPOSIUM PRECIS

DG Barham linked his presentation to that delivered in Warsaw 1 March 95 where the operational details of a Regional Advice Network were explained with reference to multi disciplinary advice to business to ensure economic growth.

[appendix 4]

The audience were reminded that the proposed Cracow centre was intended to stimulate this activity for Polish manufacturing in their region.

Objectives and project planning were explained with a clear need for procedures outlining responsibilities and accountability in the Advisory Service and Company.

[appendix 4]

Links between the founder Academic partners were supported by integration of the recommendations of the Central and East European Research Centre and the similarity to the experiences of DGB in the UK and Poland under the JEP.

[appendix 4]

He closed with thanks to TEMPUS the Know How Fund and partner Academies, and encouraged debate on these first practical steps to guide the New Product Centre and the advisory service to a secure and profitable future.

DG Barham Feb. 1996.

EXPROM

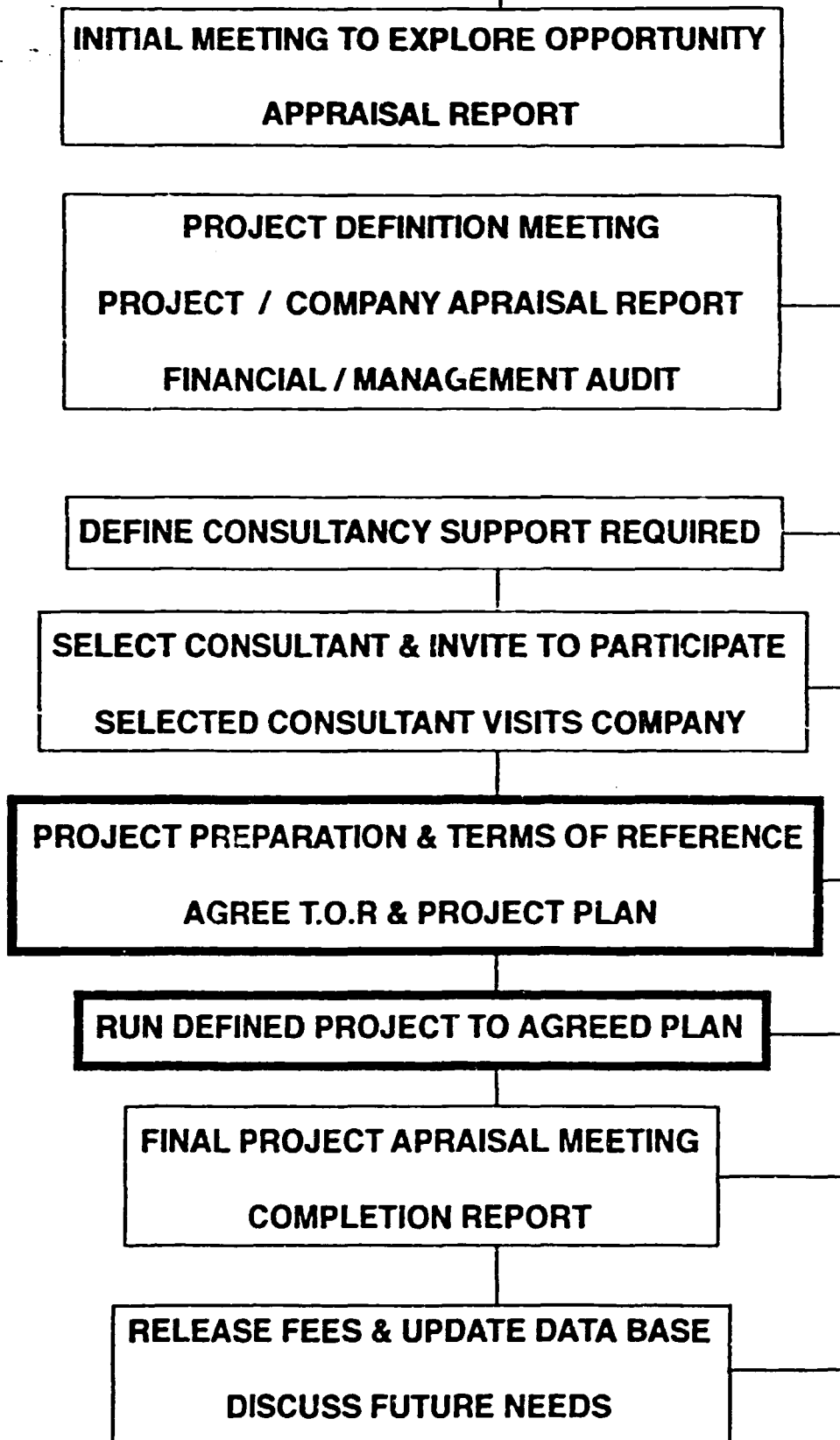
DESIGN PROMOTION PROGRAMME - PROPOSED FORMAT

1. Agree programme and funding levels
2. Promote programme to designers by published articles.
3. Raise awareness at local levels by company visits.
4. Locate Case Studies (8) and write up - with pictures.
5. Promote programme to sector and Regional Industry groups.
6. Establish Consultancy Criteria related to sectors/skills.
7. Promote Seminars programme.
8. Best Practice analysis of Consultants participating.
9. Appoint Consultancy/Industry link team.
10. Deliver Seminars - with details of EXPROM assistance.
11. Log Company Contacts - decide on strategic targets.
12. Follow up visits using Link Team.
13. Agree supportable projects/designers and EXPROM funding.
14. Manage input to implementation against TOR & BRIEF.
15. Evaluate results/complete payments to design team.
16. Publish results with promotion of next programme.

G:\FACOFF\DMC\EXPROM1

COMPANY CONTACTS

ADVISORY SERVICE





Centrum Nowego Produktu

Seminarium na temat utworzenia Centrum Nowego Produktu w Krakowie
Wydział Form Przemysłowych Akademii Sztuk Pięknych, ul. Smoleńsk 9, 31-108 Kraków Tel/fax 46 [12] 73444

15 listopada 1995

Lista uczestników		
Lp	Imię i nazwisko	Instytucja / organizacja / firma
1	Stanisław Półtorak	ASP Kraków HFP
2	Marek Lisiewicz	ASP Kraków HFP
3	Marek Sudołowski	ASP Kraków HFP
4	Jerzy Gimalski	ASP Kraków HFP
5	Paul White	FD
6	Piotr Bożyk	ASP Kraków HFP
7	Douglas Barabam	MMU
8	Lucjan Pnykalski	Politechnika Kraków
9	Antoni Hodorczyk	Ministerstwo przemysłu i handlu
10	Tadeusz Matecki	FHG Janemice
11	Patricia O'Donnell	Ambasada UK
12	Roman Terlikowski	Red. „Businessman”
13	Anna Turra	Red. rozwoju regionu K-ód
14	Magdalena Piarowska	Red. Businessman
15	Danuta Kalucka	AGH Wydz. Zarządzania
16	Krzysztof Görlich	v-ce prezydent Krakowa
17	Adam Hópicz	DOMGOS
18	Marek Piniarski	TELEKOM TELOS K-ód
19	Józef Szymanski	TELEKOM TELOS K-ód
20	Agata Jędrzejak	BEINER HTS S.A.



Centrum Nowego Produktu

Seminarium na temat utworzenia Centrum Nowego Produktu w Krakowie

15 listopada 1995

Wydział Form Przemysłowych Akademii Sztuk Pięknych, ul. Smoleńsk 9, 31-108 Kraków Tel/fax 48 [12] 223-44

Lista uczestników		
Lp	Imię i nazwisko	Instytucja / organizacja / firma
21	Andrzej Pietrusiński	BEREE TUS S.A.
22	Maria Kuliś	Dyr. LRG UH Nomy Szc
23	Stanisław Kurczak	U.H. Nomy Szc
24	Beata Tarasylis	AGH uph. Zarychania
25	Jens Müller	rojanode
26	Pomomir Jeleni	zabioch ortoped. Kio
27	Kazimierz Białkowski	UH KRAKÓW
28	Andrzej Zieliński	AYP KRAKÓW
29	Agnieszka Sobor	nasoplomo „Dekorator”
30	Anne Kwapien	Kalorie Fabryka Amatur
31	Agata Kniatka	AYP KRAKÓW
32	Lech Zatyński	ELZAB ZABRZE
33	Adam Gęlich	AYP KRAKÓW LPP
34	Czesława Frylich	ASP KRAKÓW
35	Zbigniew Baliś	KFAP S.A. K-ór
36	Margonata Bucay	KFAP S.A. K-ór
37	Hościech Tabor	U.J.
38	Zbigniew Michniowski	UH BIELSKO - BIAŁA
39	Jens Siankowski	INSTITUT UZOENKWA PEZEN
40	Andrzej Kinel	Agencja Ros. Promywn S.A.



Centrum Nowego Produktu

Seminarium na temat utworzenia Centrum Nowego Produktu w Krakowie

15 kwietnia 1995

Wydział Form Przemysłowych Akademii Sztuk Pięknych, ul. Smoleńsk 9, 31-108 Kraków Tel/fax 48 (12) 223444

Lista uczestników		
Lp	Imię i nazwisko	Instytucja / organizacja / firma
41	Tery Pomorski	AE rektor
42	Zygnard Otręba	ASP KRAKÓW LPP
43	Krzysztof Stankiewicz	ASP KRAKÓW
44	Margonata Kossakowski	radio maniacie
45	Ewa Ryba	AE
46	Krzysztof Wybieralski	Prez SPFP
47	Grażyna Stulewicz	ASP Warszawa
48	Ewa Michalska	Instytut Literacki Przemysł
49	Jacek Rutkowski	Biuro projektowe Literacki Przem.
50	Krzysztof Kuz	rektor ASP Kraków
51	Joanna Bartoszek	PUSP ŁÓDŹ
52	Filip Rątkowski	DZIENNIK POLSKI
53	Steve Hoffman	Leeds Metropolitan University
54	Paweł Granicz	ASP LPP Kraków
55	Marek Wysocki	HSK DATA ITO K-05
56	JACEK KOLIBSKI	AGENCJA REG. KRAKÓW. SA
57	Paweł Polopień	"Figo" K-05
58	Marek Siedziński	ERGO KRAKÓW
59	Ewa Pomorska	ASP Kraków LPP
60	Wolfgang Hofer	free artist

Seminar statistics

Participants

- Companies	12
- British Embassy	1
- British consultants and guests	4
- Ministry of Industry and Trade	1
- Vice-President Cracow	1
- Voivode Office Cracow	4
- Voivode Office Nowy Sącz	2
- Voivode Office Bielsko-Biala	1
- Agency for Industrial Development	1
- Agency for Cracow Region Development	2
- Chamber of Industry and Trade Cracow	1
- Higher education in design, eng., design, economics (Cracow, Łódź)	7
- Institute of Industrial Design Warsaw	2
- Teachers and students ID AFA	24
- TV, radio, press, periodicals	7
Total	70

Results of survey

1. Need for establishment of New Product Centre?
2. Need for integrated services (design management, industrial design, marketing, engineering, legal issues) assisting new product development?
3. Would your company/institution be interested in services offered by the Centre?
4. Would your company/institution like to join the list of Centre's partners/founders?
5. If you answer "yes" on question 4, in what form
 - a) in cash?
 - b) in kind?
 - b) to be negotiated?

of contribution

Only 22 participants left the filled-in forms

Type of organisation	1 Yes	2 Yes	3 Yes	4 Yes	5c Yes
Companies (3 of Cracow, 1 from outside)	4	4	4	4	4
Companies from outside the Cracow region	2	2	2		
Governmental body (Min. of Ind. & Trade)	1	1	1	1	1
Cracow Voivodship Office	1	1	1	1	1
Other Voivodshp offices	2	2	2	2	1
Agency for Cracow Region Development	2	2	1	2	2
Higher education institutions	5	5	2	5	5
Designers, design firms, Ind. Design Inst	4	4	1	2	2
Cracow TV	1	1	1		
Total	22	22	15	17	16



Centrum Nowego Produktu

Seminarium na temat utworzenia Centrum Nowego Produktu w Krakowie

15 listopada 1995

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Organizatorzy Centrum Nowego Produktu zwracają się do Państwa z uprzejmą prośbą o udzielenie odpowiedzi na pytania zawarte w niniejszej ankiecie. Zapoznanie się z opinią Państwa pozwoli na podjęcie dalszych kroków, a więc przede wszystkim odpowiedzieć sobie na pytanie, czy należy kontynuować prace nad utworzeniem Centrum, a jeśli tak, to jaka jego struktura funkcjonalna i organizacyjna będzie najlepiej spełniać wytyczone cele.

Uprzejmie prosimy o przekazanie organizatorom wypełnionej ankiety na początku dyskusji.

Imię i nazwisko

ANTONI STOLAREK

Instytucja (organizacja, firma)

MINISTERSTWO PRZEMYSŁU I HANDELU

Dep. Statystyki i Polityki Gospodarczej

1. Czy uważa Pan/Pani za celowe powołanie w Krakowie Centrum Nowego Produktu?

Tak

Nie

2. Czy uważa Pan/Pani za potrzebne wspomaganie rozwoju nowego produktu przez zintegrowane działania obejmujące doradztwo, marketing, projektowanie form przemysłowych, projektowanie inżynierskie (konstrukcja, technologia), ochrona własności przemysłowej?

Tak

Nie

3. Czy uważa Pan/Pani, że firma/organizacja, jaką Pan/Pani reprezentuje, będzie potencjalnie zainteresowana usługami Centrum?

Tak

Nie

4. Czy firma/organizacja, jaką Pan/Pani reprezentuje, byłaby zainteresowana wejściem do grona partnerów - założycieli (lub wspólników) Centrum?

Tak

DO ROZWAŻENIA

Nie

5. Czy w przypadku pozytywnej odpowiedzi na pytanie 4 może Pan/Pani w imieniu firmy/instytucji zaoferować formę udziału

- udział finansowy

Tak

Nie

- aport rzeczowy

Tak

Nie

czy sprawa ta powinna stać się przedmiotem dalszych rozmów?

Tak

Nie

Kraków, 15 września 1995

DOKUMENT INTENCYJNY

Dostrzegając możliwość wykorzystania potencjału krakowskiego środowiska akademickiego dla przyspieszenia przemian gospodarczych wyrażamy intencję utworzenia Centrum Wspomagania Rczwoju Nowego Produktu, którego celem będzie tworzenie warunków do poprawy rynkowej konkurencyjności produktów przemysłowych, a terenem działania region Polski południowej. Wstępny program działania, struktura i zasady finansowania Centrum są zawarte w załącznikach do niniejszego dokumentu.

Akademia Ekonomiczna



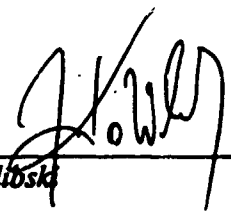
Prof. dr hab. Jerzy Mikołowski Pomorski
Rektor

Akademia Sztuk Pięknych



Prof. Włodzimierz Kunz
Rektor

Agencja Rozwoju Regionu Krakowskiego



Jacek Kolibski
Prezes

LETTER OF INTENTION

We, the undersigned, recognising the opportunity to utilise the potential of Cracow academic resources to contribute to the quickening of economic change, express our intention of establishment of the New Product Centre (Centre for Assistance of New Product Development), whose aim will cover creation of conditions for market competitiveness of industrial products. The Centre will operate in the southern region of Poland. Preliminary programme of activities, structure and financing system are annexed to this document.

Academy of Economics

(-)
Prof. Jerzy Mikułowski Pomorski PhD, Rector

Academy of Fine Arts

(-)
Prof. Włodzimierz Kunz, Rector

Agency for Cracow Region Development

(-)
Jacek Kolibski, President



KFAP S.A. Your source for measuring equipment

Krakowska Fabryka Aparatów Pomiarowych established in 1949 with tradition going back to the twenties, transformed into Joint Stock Company in January 1992, is one of the major producers of control measuring apparatus in Poland, especially within the range of industrial temperature measurements. KFAP designs and manufacture wide range of measuring equipment, RTD's, thermocouples, for more than 30 years. We have the capabilities and experience to put together a proven sensing solution at a cost-effective price, for your application.

RANGE of PRODUCTION

We offer wide range of control-measuring equipment, with several styles and variations:

- a) Temperature sensors and transducers:
 - thermometer resistors: industrial resistance and thermoelectric
 - temperature sensors; temperature sensors accessories: aluminum or plastic heads, ceramic clamp cubes, clamps; temperature sensors for air conditioning systems.
- b) Heat energy meters
- c) Air humidity transducers
- d) Transducers and meters for: flow, level, and pressure difference
- e) Electropneumatic transducers
- f) Meters and recorders

TECHNOLOGICAL CAPABILITIES

- a) Machining:
 - with center and chuck lathes (also computer controlled) and with sequence controlled semi-automatic lathes.
 - with universal and computer controlled milling machines including hobbers and in working centers.
 - with surface, cylindrical and centerless grinders.
 - toolworking, e.g. drilling, threading, manual working;
- b) plastic working:
 - stamping on mechanical and hydraulic presses of tonnage ranging from 6,5 to 160 T (65-1600 kN).
 - thread rolling.
- c) permanent jointing:
 - electrical welding (bare or shielded),
 - pressure welding, gluing;
- d) plasmatron cutting;
- e) thermoplastic injection moulding for pieces up to 160 g;
- f) galvanizing (electrolytic and conversion plating) and varnishing;
- g) assembly requiring fine mechanics, assembly of electronic packages, ware soldering inclusive.

CUSTOM DESIGN

Stock solutions aren't always the best solutions. KFAP has designed many custom sensors, to meet the specific needs of mining, military installations or aviation. If you have a specific need, or you can let our engineers suggest innovative ideas to tailor a measuring equipment to your application.

OFFER FOR COOPERATION

KFAP S.A. would like to start direct relations with companies:

1. interested in purchase or distribution of apparatus produced by Krakowska Fabryka Aparatów Pomiarowych S.A.
2. offering the following items for sale:
 - flow transducers (turbine, supersonic and other types), especially for heat energy meters,
 - wires for shielded thermocouples,
 - electronic subsystems,
 - sensors for controlling natural environment conditions,
 - leads for cable sensors (thermoelectric and two-, three-, and four- core copper ones) to be applied in temperature up to 400°C.

We propose cooperation in the range of:

- simple cooperation (treatment of parts, assembly of subsystems, elements and final products),
- manufacturing of products based on the transferred know-how, access to technology and sales markets,
- joint elaboration and production of goods meeting KFAP S.A. experience, such as measuring apparatus, equipment for measuring and calculating thermal energy, environment protection, etc.

**We would be obliged for all proposals for cooperation
in the form of purchase-sale agreement,
contracts for cooperation, or joint-venture company.**



**KRAKOWSKA
APARATÓW POMIAROWYCH**

**SPÓŁKA AKCYJNA
JOINT STOCK COMPANY**

Zbigniew Baliś

**V-ce President
Technical & Development Manager**



**KRAKOWSKA FABRYKA APARATÓW POMIAROWYCH
JOINT - STOCK COMPANY**

**30-126 KRAKÓW
ul. G. Zapolskiej 38
POLAND**

**tel. +48(12) 37 36
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tix: 322417 fap
e-mail: office@kfap.krakow**

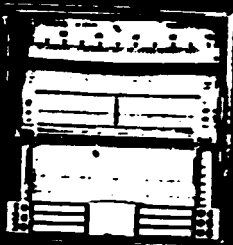
WYCH

KRAKOWSKA FABRYKA APARATÓW POMIAROWYCH JOINT-STOCK COMPANY

7 36 10
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INDUSTRIAL



POLISH PRIVATISATION ASSOCIATION / SOLUSIN. POLSKIE TOWARZYSTWO PRYWATYZACYJNE - KLEINWORT BENSON

Sp. z o.o.

zad.

Tony Wilson

Dyrektor Inwestycyjny

ul. Długa 5
00-263 Warszawa

tel.: (42) 635 63 86
(2) 635 63 86
Fax: (2) 635 63 14

**U.N.I.D.O. Company Visit Report.
Douglas G. Barham.
Manchester Metropolitan University.**

Thursday 16 November 1995.

**KFAP 30 - 126 Krakow
UL.G. ZAPOLSKIEJ 38**

The invitation to visit KFAP was provided at the seminar by Zbigniew Balis Technical Director.

The company is a joint stock company - UK finance and management being provided by Klienwort Benson Merchant Bank. The investment Director being Tony Wilson.

KFAP have modern factory premises in a suburb of Cracow well served by road and tram. Clearly in the past the extensive manufacturing facilities had seen more activity and employment opportunity. The machinery was, for the main part manually operated, 2 CNC machines were in use machining castings, all other machining was capstan or manual.

The company had themselves designed and manufactured a multi position rotating machining centre, which whilst not truly robotic did show a substantial move forward towards automation, this system was machining a pressure die cast body for a water temperature sensor. This product seemed to be a core product as much of the work in progress was centred at this product.

The other mainstay of production was the recorder systems, some mechanical systems some electronic with design and assembly within the company and bought in printed circuit boards.

there was clearly major opportunity for business expansion with existing products and the potential for generation of other products and systems.

The meeting with design and technical staff which preceeded this tour of the works was open and direct.

There was clear evidence of management and technical skill in the engineering personnel. More importantly from the New Product Development future they were prepared to operate as a team to share views and opportunities for the companies benefit.

The product tabled for discussion was a direct reading water meter which was to be the current product undergoing industrial design revision by Adam Gzdinska from Cracow College of Art & Design.

It was valuable to discuss the company approach to New product development (which was in the main incremental) with the accepted western principles where marketing and design are closely integrated. The company recognised that now, with western partners providing access and finance to fund growth, the generation of new products for appropriate markets was essential.

It was agreed that a management strategy which incorporated NPD was vital and

that the services of the New product Centre as envisaged by the UK advisors was of real value for the future.

It was further discussed that the centre should provide management of the agreed NPD programme and ensure quality service from the selected consultant.

The centre would charge 25% of the project fee as a management / handling charge.

The company agreed that this seemed an appropriate charge for the expected service and offered to be a sponsoring organisation offering support in advertising and kind. They further requested whether it would be possible for companies to offer key services through the centre as consultants. This key service was viewed as entirely desirable and it was agreed to involve KFAP in the research programme to establish appropriate centre services.

**U.N.I.D.O. Company Visit Report.
Douglas G. Barham.
Manchester Metropolitan University.**

Friday 17 November 1995.

**HSK Data Ltd.
E. Godlewskiego 14
30 149 Krakow Poland**

HSK is part of a conglomerate of companies owned by the founder Mr. Zasada an ex Mercedes Benz competitions driver from the Rally Team. He owns the Mercedes Benz Dealership of Poland and also the site outside Cracow where he has been involved in manufacturing for 15 years.

The initial manufacturing activity on the site was zips , Zasada was the first zip manufacturer in Poland. The company developed its own special purpose machinery and established a good tool making, pressure die casting and injection moulding facility.

Other business activities have been generated from this core business involving HSK Data an electronics activity where the key markets are security (key swipe and id entry systems) The are the sole manufacturer of the Mercedes Benz car immobiliser system (the only one we are told, which is approved by the MB company and is approved by TUV German Standards)

Parallel activities under the company name ALPHA are manufacture of 'Karcher' German street and equipment washing / cleaning vehicles. (could be a knock down unit but large components - including bodies , gear boxes, chassis are , it is claimed made in Poland .Clearly we were not in a position to verify this statement.)

A toy 1/4 scale childrens car is also manufactured on site for key car dealerships in Europe Mercedes Benz Audi Jaguar Porsche. This product is very well engineered and uses similar engine /gearbox system to the Karcher machines.

The standard of engineering assembly and manufacture was of the highest order and in general factory layout was good.

There is clearly scope for expansion on the specialist vehicle systems fitting and maintenance where HSK immobilisers could be fitted to theft sensitive cars and commercial vehicles.

The discussions centred on the necessity for HSK to embark on a programme of new product development where industrial design was the the key to product differentiation in niche markets for electronic protection.

Undoubtedly HSK (& the other companies on site) can manufacture fit and service that which is created ; it is the need to encourage the integration of industrial design skills into an engineering dominated product development team that is their need.

They have the services of an industrial design consultant Mikolaj Rey ex Cracow

College of Art & Design, and need (with the help of the proposed centre) to develop an in house training scheme to integrate design management and a corporate identity where the aim is 2 New Products a year selling through established distribution networks into known established niche markets.

Mr. Marek Wysocki the general manager (MD) was emphatic that a service such as the new product centre, which was guiding and quality managing the development of services provided to and embodied with in HSK was a key business focus for the future. They were pleased to offer their support and wished to be involved in the development and launch of the services proposed by the New Product Centre.

Appendix 9

The Enhancement of Industrial Design Education and Practice in Poland

The following is a record of discussions between business managers, practising designers and academic staff which took place in Warsaw on 27 February 1995 and which was facilitated by a preceding three day training workshop.

Within this group it was generally perceived that there was an absence of industrial/business development strategies from central Government. It was believed that if formulation of policy concerning business development took place, it would enable within industry the long-term product and business planning which is essential to business growth.

Managers within industrial enterprises who were responsible for product development and commissioning of consultants, saw the need for a national consultancy data base. This would allow managers access to unbiased, validated intelligence concerning consultants' skills and experience. A further requirement expressed was that consultancy input could be guided by personnel with practical experience of product development.

The quality control procedures inherent in such a data-base, it was agreed, would be valuable to both the design profession and industry managers. It was further believed by the design profession that a standard format for a contractual Terms of Reference (ToR), and guidance on fee scales would also enhance the professionalism of the design community.

There was discussion concerning a possible conflict of interest between the educational and commercial activities of both academic staff and design students. This conflict arises from the fact that, historically, staff have been encouraged to undertake design commissions to support their professional development and also to supplement low academic remuneration. Additionally students seek paid design work to support their studies because they receive no maintenance grant whatsoever. Student activity as described above often leads to a fragmented attendance pattern.

This set of circumstances has resulted in occasions where academic staff have been in competition with their own students in the commercial arena. Traditionally, staff undertaking research/consultancy have had access to college resources, and this pattern persists, however now that the academies are in possession of CAD and DTP facilities, some students who are employed by outside agencies can use this equipment for commercial activities on behalf of their employers with all that this implies. The possible outcome of all these circumstances is that the growth of an independent design consultant community could be inhibited.

A further topic raised by industry representatives also concerned the role of Government. It was felt that the Government should consider, as part of a broad industrial policy instrument, the provision of financial assistance to support the development of new products. The assistance could take the form of, for example; direct development grants; tax concessions; debt adjustment; relocation expenses; and possibly low rent new industrial buildings and relocation expenses. The conditions attached to awarding these grants should be such to secure product or service developmental activity.

There was also the opinion that any policy instrument should include procedures for monitoring imports in respect of product category and quantity in order to direct import substitution activities within the Polish manufacturing sector; supported by marketing intelligence services provided as a national resource by a central Government agency.

The foregoing discussions were regarded as a valuable activity by all delegates who agreed that the following recommendations arising from the debate, which had been initiated through UNIDO sponsorship, could provide a synergy between the major contributors to product successes, and lead to the further development of Industrial Design as a professional activity.

Recommendations

1. There is a evidence to support the development of a funding policy which enables academic study without the student having recourse to near full-time employment. Such funding would provide fees and maintenance grants; and might include a pay-back facility, in the form, say, of a graduate tax.
2. Some consideration might be given to how higher education is funded overall; there appears to be a requirement for national restructuring and general policy formulation concerning the level of academic salaries and the balance of time to be expended between academic duties and professional development in the form of industrial consultancy/research.
3. Government policy for supporting industrial and business development as described above, should be evolved as a matter of urgency in consultation with relevantly experienced managers.
4. To enhance the status of the design profession the Polish Society of Designers could be encouraged to expand their role to become a nationally recognised body responsible for the validation of professional, (as opposed to academic) competencies within all design disciplines.
5. Further discussion is required on developing a national database of design consultancy expertise.

The above recommendations, if accepted, imply a considerable amount of work in discovering, analysing and developing policy instruments to support industrial growth, and this would not occur without the investment of further resources. If required a report could be prepared to help in this important task.

Paul White
John Doyle

15 February 1996