



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

23687

RESTRICTED

February 23rd, 2009
Original: English

**SUPPORT TO FACILITATING INTERNATIONAL MARKET ACCESS
FOR MANUFACTURING SUPPLIERS IN THE AUTOMOTIVE
COMPONENT INDUSTRY IN SERBIA
UE/YUG/06/002-1151-2008
SERBIA**

Final Report on contract 16001665

Prepared for United Nations Industrial Development Organization
By the ACS – Automotive Cluster of Slovenia

Based on the work of Mr. Dušan Bušen
Chief Technical Adviser

ACS – Automotive Cluster of Slovenia
Ljubljana, Slovenia

Final Report on contract 16001665

Page 1 / 46

CONTENT

ANTECEDENTS

- Project synopsis
- Project summary
- Implementation framework
- Project background and context
- Institutional set-up and overall project organization

MAIN REPORT

- Objective 1: Enterprise upgrading – implemented by individual cor
- Objective 2: Capacity building – upgraded capacity of support inst:
- Objective 3: Cluster development – development and linkage with initiative

CONCLUSIONS AND RECOMMENDATIONS.....

Annexes 1-10.....

ANTECEDENTS

Project synopsis

The Final Report of the project "Facilitating International Market Access for Manufacturing Suppliers in the Automotive Component Industry in Serbia", contract number 16001665 has been written by Dušan Bušen and Urška Gluhak as result of UNIDO Terms of Reference dated 25 June 2008 and Proposal dated 23 July 2008 and clarification submitted by fax 14 August 2008 and e-mail dated 18 August 2008 submitted in response to UNIDO Request to Proposal No. 16001665/NM of 10 July 2008. Project duration was 76,5 days over a period from August 2008 till end of January 2009.

Project summary

The overall objective of the UNIDO business partnership and cluster programme for the automotive component industry in Serbia aims strengthening its suppliers to meet requirements of vehicle and 1st tier automotive component manufacturers so as to be able to access and sustain in global supply chains and international markets, in the particular in European Union. Within the context, the programme envisages to support and strengthen the institutional framework providing practical services to suppliers in the industry sector concerned, achieving three inter-related objectives that are outlined below:

Implementation framework

The proposed action strikes the balance between the creation of advantage for the involved organizations and region – in terms of exchange of experience and institutional development – and the maximization of the direct and tangible benefits for the involved enterprises on Region Level. The work plan will run over a period of 6 months. The project will be divided up into three main project phases:

Start up

The start up phase mainly involves the coordinator, lead enterprises, local experts and academic experts. The project is continuation of previous project. Some of main issues were already done. At the beginning will be the main meeting, where decision will be taken as to the time-schedule and the key issues addressed during the later implementation. The implementation will be made in line with the technology, scientific and industrial strengths of each side. The methodology applied regarding the analysis and evaluation of the business cores as well as market specificities. Decisions will be taken collectively.

Implementation

During this phase while the cooperation partner exchange is to help enterprises seeking new European Business opportunities, the workshops serve to analyze and discuss the different organization models of the participating enterprises. The preparation of policy recommendations will be supported by an evaluation of the strengths and weaknesses.

Final phase: Achieving and disseminating sustained results
Policy recommendations and policy lessons will be finally discuss and rev

Other issues relate to *Communication and Decision-making*:

- The use of electronic communications will be a key element to fa disseminations.
- Day-to day decision making will be the task of leader of the project decision – making process will be the regular face-to- face meetin Serbian organizations.

Project background and context

The automotive industry is undergoing a period of turbulent change in competition and worldwide overcapacities and also the supply chain transformation. As car makers seek to cut costs and spread development and more to supply industry. This is reflected in a declining vertical manufacturers and rapid growth of value of the supply industry. First a taken increasing responsibility in areas such as electronic, mechatronics, e modules or pre-assembled systems are delivered just in time to the car fact

At the same time, European manufacturers are under a cost and innovate down the supply chain. This pressure to reduce costs is felt particularly s tier component and part suppliers. Lacking the proper resources to in difficult for the lower tier suppliers to innovate and add value to the produ

The Serbian automotive industry is also under pressure of the global mark development process in the region which was in stagnated phases during tl

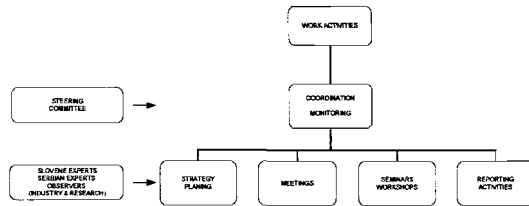
Within the following, there are three main tendencies, which are the n viability of the Serbian automotive component suppliers:

1. The continuously increasing demand for high quality,
2. The ability to integrate parts and components into comprehensive syst
3. The growing strength of large tier 1 suppliers.

Institutional set-up and overall project organizati

The main work was undertaken by Slovene experts, with direction give The Steering Committee is composed of members from the Ministry of E Economic Serbia and UNIDO. Experts will also submit their findings i discussion and approval. In specific key areas it also appears useful additional internal Serbian experts (mostly from companies) and/or industrial background into the work.

The Institutional Set-up



Staff

Name	Function	Description of the work
Dušan Bušen	Team Leader	Team Leading
Urška Gluhak	Team Member Cluster Development	Cluster building
Milan Bavec	Team Member Cluster Development	Enterprise upgrading
Jerko Bartolič	Team Member Continuous improvements	HR capacity building
Elvis Ipsa	Team Member Continuous improvements	HR capacity building

MAIN REPORT

Based on experience reached by the cluster formation process in SI building process in other countries, ACS prepared the content of a , which we all together defined all the necessary areas for cluster dev automotive supplier industry in Serbia. The main activities were divid under each of these pillars further below:

- ⇒ Enterprise upgrading
- ⇒ Capacity building
- ⇒ Cluster development

The draft Strategy was prepared by a Slovenian Expert, in the name of done by the Serbian colleagues Igor Vijatov and Dejan Vratonjić.

We give recommendations and suggestions for follow-up under the th of the report.

The AC Serbia's Strategy is available only in Serbian Language. \ items from the contents, where it was necessary.

Objective 1: Enterprise upgrading – implem companies coaching

⇒ Memorandum of understanding clarifying relations in the gr program management and the roles of participating stakeholders/)

The main objectives of this activity was that all CEO's from the parti roles and responsibilities of the program managements and after the understanding clarifying relations in the group. The main challeng possible interested companies.

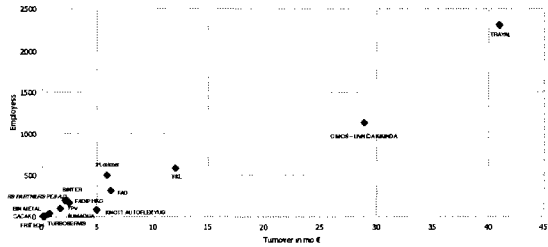
The Memorandum specifies that the main responsibilities for all staff are to:

1. Actively cooperate into programs and into working groups.
2. Participate into common seminars which are realized from domestic
3. For the time of program duration company and duration of continun cooperate with third parties. Cooperation with third parties is , agreement.
4. Company will obligate to gives space, documents and data about UNIDO will obligate to give announcement at least one day before c
5. Preparation of training, presentations and materials is obligated fro
6. Work of all UNIDO Experts which is include into all trainings, pre charge, company will take care of all travel expenses and hotel c which are necessary for successful carried out program.
7. The obligation of all UNIDO Counselor is to toke care with all inf tree years from the end of the program.

The Memorandum was signed by 13 companies. The company Trayal signed the Memorandum of Understanding at a later stage and was incorporated in the programme after the kick-off meeting, which took place on 1-3 October 2008. The list of companies who signed the Memorandum is presented in Annex 1.

Regarding the signed Memorandum, companies are represented by employees and turnover (for a detailed description, please refer to the Annex). The Graph shows that company Trayal is the strongest company in the group, then follows company Cimos – Livnica Kikinda and FKL. Other companies are in ranked between 0-500 employees and between 0-6 mln € by turnover. A table with the number of employees and turnover amount is also presented in the Annex.

Graph 1: Review of companies by employees and turnover



⇒ **Collection, harmonization and translation of all training materials in Serbian language**

Training materials for the company counseling as well as the institutional capacity building activities were prepared in the local language on the following topics:

- *Continuous improvement I - concepts, tools and techniques, Continuous improvement II - Implementation on shop-floor level,*
- *5S workplace management*

The following experts were in charge of the collection, preparation and translation:

Mr. Bavec from ACS with support from Ms. Pešić-Rakanović, Mr. Vijatov and Mr. Vratonjić.

- *Competitive position of Serbian automotive components industry*

Experts in charge of the collection, preparation and translation:

Mr. Bušen and Ms. Urška Gluhak from ACS.

- *Quality improvements*
- *New Product Development workshop*
- *Improvement processes*
- *Working groups and team building*
- *Improvements in delivery performance*
- *Operational cost savings*

Experts in charge of the collection, preparation and translation:
Mr. Bušen from ACS and Mr. Bartolič from CIMOS Slovenia.

For the upcoming training event in April 2009, the following training made available in Serbian language:

- *7 QC Tools*: fundamental instruments to improve the quality of analyze the production process, identify the major problems, quality, and provide solutions to avoid future defects. These and knowledge to accumulate data and analyze them. They collected data in a way that is easy to understand and analyze seven QC tools, any specific problems in a process are identified
- *Single Minute Exchange of Dies (SMED)*: A process that can handle set-ups and changeovers. Quick Changeover means that for machine or process. It can be used as a guideline to eliminate production processes, especially while changing a machine from
- *Poka Yoke*: A method of preventing errors by putting limits performed in order to force the correct completion of the formalized, and the term adopted, by Shigeo Shingo as part of the
- *Kan ban (visible record)*: A system of notification (visualization) in a manufacturing system.

⇒ **Introductory seminar for selected companies (1 day for CEOs in each company (topics: automotive industry today and its most in field of process management, continuous improvement, decision groups, visualization, standardization, 5S)**

The seminar was successfully organized and held in Kragujevac from on training materials prepared on preparation seminars. CEOs have program and delivered full commitment to the presented program companies went through an intensive two-day training and received in:

The one-day training seminar for CEOs was attended by 24 managers and 4 participants from AC Serbia and ACS Slovenia. The main stresses

- ✓ presentation of quality requirements, costs containment and supply industry,
- ✓ presentation of concepts, systems and tools of KAIZEN as implementation method of this concept into the company,
- ✓ Adoption and analyze of the current situation in companies, elaborating defining goals.

All managers received the questionnaire with state assessment in fields' management, moral and cleanliness, quality, supply reliability, production technology, productivity, stocks and working means. All managers also got the main directions from European automotive industry as a benchmark. An assessment made after one month provides an excellent basis for setting goals and defining a business plan.

On the basis of the discussions undertaken, it was realized that there is a big difference between the Serbian and global automotive industry. Managers are aware of the urgency of the implementation of knowledge presented knowledge and changes and also necessity of bigger activity of the management.

In the two-day workshop there was a debate on the ways to implement working groups, order and cleanliness – system 5S and first steps for continuous process improvement. The main emphasis was on creating the conditions for successful improvement of continuous process improvement. The current situation was assessed on the basis of a short questionnaire with all participants. The analysis shows:

- ✓ problems due to the weak information science and deficiency of computers (no information about quality, stocks, costs, ...).
- ✓ lack of competent and qualified middle managers that can efficiently manage working groups and implementation of the process.
- ✓ Big lack of financial resources, to result from the lack of orders and programs.

The detailed programme of the seminar is presented in Annex 2.

⇨ **Counseling work in selected companies (upgrading) in 2 geographical groups. Independent work of Serbian counselors, ACS expert would assist counselors in 2 working days.**

The main emphasis was placed on explaining the methodology to internal counselors in the companies which were divided into 2 (two) geographical groups or "sub-clusters":

- **Northern sub-cluster – was mentored by Mr. Igor Vijatov:**
Cimos Livnica Kikinda, Knout, RS Partners PES, TPV Šumadija, (FADIP, FKL)

FADIP has been facing serious problems in 2008 and it was not possible to work with this company. If their overall situation improves during the upcoming period, they would like to enter the programme in 2009

FKL is in the middle of its privatization process and it was not possible to work there. They would like to enter the programme in 2009

- **Southern sub-cluster – was mentored by Ms. Maja Pešić Rakanović:**
Bin Metal, Sinter, FAD, Turbo Servis, 21. Oktobar, Trayal

Overview of the counseling schedule:

- 1 ✓ Short Audit of production processes (business processes)
✓ Presentations of key performance indicators (selection of adequate)
✓ Selection of adequate methodology (tool) for Process of Continuous Improvement PCI
✓ Definition of zones (group – Mini Company MC)
- 2 ✓ Presentation 5S
✓ Detailed explanation of step 1 (+ visualization) and definition of work plan for 5S implementation
- 3 ✓ Analysis of done homework after prior visits
✓ Detailed explanation of step 2 and definition of activities for its realization
✓ Appointment of joint meeting with other project participants
- 4 ✓ Analysis of done homework after prior visits
✓ Visitation of zones dedicated for 5S implementation
✓ Evaluation of affectivity of carried out activities and analysis of achieved results for the defined key indicators (5S audit)

From 23rd – 25th November Mr. Bavec visited some companies in order to provide additional suggestions (List of companies and detailed visits)

Remark: Company FADIP – The management asked us to postpone v some financial and organizational problems. Since the situation has program progress, the above company would be included at a later stage would continue as expected with 2nd batch of companies.

⇒ **Organization of seminars for all participating companies on quality cost reductions, innovations, 3M) - ACS expert would assist one day for preparation and 2 days for seminar)**

From 19th to 20th January 2009 the Cluster Review meeting was held in Continuous Improvement seminar.

The organizational team was composed of:

- Igor Vijatov, director of AC Serbia, counselor for PSP
- Dejan Vratonjić – AC Serbia
- Maja Rakanović, counselor PSP
- Milan Bavec, counselor of ACS
- Enterprise 21.OKTOBAR, place and equipment for the seminar

The seminar was attended by 8 companies. Three companies were (Fritech). The company CIMOS was absent because they had ISO FRITECH had a serious problem with a lack of orders. They were participate in the programme.

The work was conducted in accordance with the schedule specified in the attached agenda (Annex 2). The first topic was the actual work of the enterprises after the introductory seminar. The situation was summarized by Mr. Vijatov. Mr. Vijatov and his colleague Maja Rakanović executed 2 to 4 visits to the companies between 3rd October 2008 to 16th January 2009, which is slightly less than planned.

The reason had to do with business and other difficulties experienced by the enterprises (Sinter, Bin Metal, Fadip). All 3 mentioned companies are small enterprises, which face extensive problems due to the crisis in automotive sector. Priority of the management including staff responsible for PCI involvement is to take measures for reducing crisis effects. It was agreed that this delay would be overcome in next time period through intensive involvement of staff.

This was followed by a report of 8 present Companies (21. oktobar, FAD, Trayal, RS PES, Sinter, Turbo Servis, Bin Metal, Knott, TPV Šumadija), that have reported on their activities on the establishment of working groups - MD and activities the order and cleanliness of 5S. Their work was presented by power point presentations. Very surprising was a significant activity in all companies, although some are currently working in very difficult circumstances.

Some have tackled a situation a bit by their own, because the activities are taking place through other levers (TPV - audits and measures by the parent companies) or for specific situations need to find an appropriate approach (Trayal rubber).

Some companies included in their presentations a comprehensive "assessment of conditions in the company" by a questionnaire from the introductory seminar (Knott, FAD, 21 Oktobar). Most companies have shown a selection of key indicators - data that are important to their businesses and their improvement, they have gathered at the initiative of both instructors and under the influence of items benchmarking ACS, which was shown at the 1st Seminar.

Their diligence and openness in the presentations was commended. At the same time some failures and deviations were pointed to. Above all, they have not yet started to improve things with the help of tools PNL or CAPD, which is also the theme of 1st part. It is necessary to build the database and define the key indicators for the level of mini-companies they need this to improve their quality, lowering costs, etc.

In the second part, we carried out three workshops to improve the quality and reliability of supply and reducing costs through expert groups at the level of mini companies, or management of sectors and companies. In the end, a model of organizing and management system improvements for all employees was shown.

A third seminar is likely to take place in March or April 2009.

The seminar Process of Continuous Improvement Part 2 included the following topics:

- o **Improvement of factors of competitiveness** (Quality, costs, SDCA Deliveries – PDCA and team work in working groups)

- With use of these factors, managers should make necessary in about quality, costs and reliability of deliveries for particu standardization of these concepts – SDCA.
- In base of SDCA MC and expert groups in shape road maps, r for improvement in 1st year or in some other selected period.
- With tools of PDCA and existent knowledge managers shou three factors of competitiveness.

This workshop dealt with options for data collecting – mostly at (“hand” or computer based support) and reviews way to improven possibilities for general and specific know-how of different groups

- o **Innovativeness of all employees** - Suitable accession for stimulat of all employees).

System stimulates innovativeness of all employees, to search for working place. The purpose is to attain more proposals from each includes also workers help with the implementation.

On this workshop we showed suitable rulebook for generating n suitability and proposes rewarding. System is suitable also for mot Rulebook is also appropriate base for making rulebooks of the managers, syndicates and other worker representatives.

In the time between 1st and 2nd seminar companies elaborated status assessn training of Continuous Process Improvement, established working g introduced visualization processes and did the first two steps demonstrated through PowerPoint presentations and the pictures companies that were absent will present their work during the next sen

The program and visits can be found in Annex 4. The status of impro 5.

Objective 2: Capacity building – upgraded institutions

- a. **Strategic analyses of competitive position of Serbian automc components industry based on Slovenian cluster experience in industry**

A strategic workshop had been organized within the scope of AC Sei (16th and 17th December 2008) with key stakeholders from representing, public sector, private sector and government.

The first day (Annex 6) of the workshop focused on the competitive position of the Serbian automotive components industry. The second day (Annex 7) of the workshop focused on the upgrading capacity of supporting R&D institutions. Positioning of Serbian automotive industry has been carried out by *Slovenian cluster experience*. Representatives from the following stakeholders have participated on the above workshop: UNIDO, Ministry of Economy and Regional Development, Serbian Chamber of Commerce, SIEPA-Serbian Investment & Export Promotion Agency, VIP-Vojvodina Investment Promotion, Serbian Agency for the Development of Small and Medium-sized Enterprises and Entrepreneurship, GTZ, USAID, AC Serbia Member Companies.

The active involvement of participants in the workshop, especially when divided in small groups, exceeded expectations. After a short presentation of the moderator and a description of topics, participants were divided into three groups three times. Each small group presented their findings and at plenary discussion moderator structured conclusions into common inputs for upgrading the Strategy. The AC Serbia Strategy was later upgraded by UNIDO international and national experts based on the inputs of above workshop.

As a first step, a strategic analyses based on 5 pages document (available only in Serbian language – the English version will be available in the spring 2009) entitled "Identification of problems and proposed measures for development of automotive suppliers industry in Serbia" was prepared together with Serbian counselors, was decided to include all analyses in new AC Serbia Strategy.

The workshop "Upgrading capacity of supporting R&D institutions" is described under point b.

The AC Serbia Strategy outline in English is presented in Annex 8.

- b. **Supporting Research Technology Development (RTD) institutions, chamber and development agencies in Serbia as providers of capacity building in specific areas (collaborative projects with companies, incorporating students in companies projects, offering education and training capabilities according to the identified needs, productivity enhancement)**

A strategic workshop was organized in Serbia within the scope of AC Serbia Regional Cluster Meeting (16th and 17th December 2008) with key stakeholders from Serbian automotive industry representing, academia, independent RTD institutions, RTD departments in automotive suppliers, chamber of industry and regional development agencies with the strategic goal to develop capacities to Serbian support institutions to assist Serbian automotive industry to improve competitiveness through collaborative projects, incorporating students into AC Serbia member's project, offering training and education according to identified needs and productivity enhancement.

Representatives from the following institutions participated in the workshop *Upgrading capacity of supporting R&D institutions* that was also moderated by Mr. Dusan Busen from ACS: UNIDO, Ministry of Economy and Regional Development, Serbian Chamber of Commerce, SIEPA-Serbian Investment & Export Promotion Agency, VIP-Vojvodina Investment Promotion, Serbian Agency for the Development of Small and Medium-sized Enterprises and Entrepreneurship, GTZ, USAID, AC Serbia Member Companies.

During the workshop participants worked in small groups. The communication and cooperation between the government, the private sector and academia was difficult. As a result of the discussions, it was suggested that cooperation should be through collaborative projects and relevant common activities were elaborated.

Another key result or realization of the workshop was that the Serbian automotive industry can only be competitive by providing innovative products and services. To achieve this, the active participation and support of RTD performers was essential.

As a happy by-product of the workshop then, the capacity of Serbian automotive industry to provide innovative products and services was significantly improved in the second half of 2008 through new membership of Faculty of Electronic Engineering, Nis, the centre of electronic industry in underdeveloped South Serbia. R&D institutions had become members of AC Serbia:

- o Faculty of Electrical Engineering, Nis
- o Faculty of Mechanical Engineering, Belgrade
- o Faculty of Technical Sciences, Novi Sad
- o Zastava Institute, Kragujevac

When project finishes, staff of AC Serbia would be trained to conduct the project. This should be covered by interested stakeholders, who would establish a company. In future, especially in phase 2 other institutions should be involved, insurance companies, development agencies, chamber of commerce, consultancy bodies should also be involved.

c. Assist in development of technical assistance package for the Serbian automotive industry (provide upgrading services to companies (building up the capacity for innovations in SMEs))

Guidelines to offer methodological support to AC Serbia staff to develop technology innovations should be prepared in spring 2009. AC Serbia workshop once or twice per year which would be dedicated to new identified project ideas would be structured in program areas will be launched. AC Serbia staff would offer all support to prepare project proposals, attract missing partners into the project and to then also present project proposals to the organization. As mentioned this is not used yet, special workshop will show the methodology on case from industry. Specific inputs to prepare already collected during the Strategy workshop in Zlatibor and the two AC Serbia staff for the sustainable delivery of technical assistance.

d. Assist in carrying out training of the staff of Serbian automotive industry (delivery of technical assistance on the developed material and mechanisms, so as to enable them to independently undertake it at level of the project (facilitation of collaborative projects))

plans, project management, preparing proposals for national and EU calls, school of quality, new product development)

A two-day training was organized in Belgrade from 18th December till 19th December for AC Serbia team. Mr. Bartolic and Mr. Busen provided information and transferred their experiences to AC Serbia staff in order to prepare them assist Serbian member companies in facilitating collaborative projects, the development of business plans, project management, and the preparing proposals on national and EU calls.

The main result of these activities is collaboration on EU Calls, named:

CIP-EIP – Europe INNOVA-ENT-CIP-09-C.N01S00:

Europe INNOVA European Innovation Platforms for trans-national cluster cooperation, knowledge-intensive services, eco-innovation and the promotion of novel tools and service concepts for innovation support innovation

In response to this call, the project AUTOCLUSTERS was submitted as a collaborative proposal by the antoclusters of Serbia, Slovenia, Slovakia, the Czech Republic and Germany. Briefly, this project brings together Universities, R&D institutions, SME support facilities from EU-15, NMS as well as IPA to prepare and create the first automotive network in SEE. The second level clustering activities proposed by project are strictly oriented towards improving the innovation capacities in the region and improving the technology and knowledge transfer – improvement the innovation circle. The project will analyze cluster development and related best practices across the region and also study the innovation capacities of selected stakeholders in each participating region – from sides of the SMEs, R&D as well as public sector. The results will be disseminated by an interactive innovative map of the automotive industry for the SEE region as well as summarized in a Study. Based on the results the project, joint innovative pilot projects in 4 selected area of interest (i.e. Green energy or Plastics) will be proposed for future funding. As part of the project, cooperation between universities and SMEs will be improved as well through a permanent exchange programme.

e. Encourage environment friendly production to ensure sustainable development through cooperation with UNIDO NCC in Serbia

We could not imagine sustainable development without environment friendly production, where CO2 emissions became one of the most important drivers of development in automotive industry and technology applied in. Based on cooperation with AC Serbia and UNIDO NCC in Serbia, ACS assisted in the preparation of automotive sector related materials and focused workshop was organized on March 5th with presentations of colleagues from UNIDO NCC on Clean Production Principles, Introducing Clean Production in Serbian companies and a Presentation of Chemical Leasing. All participating companies have been invited to join program of UNIDO NCC.

f. Support the project partners in the exploration of market opportunities and development of regional development strategies with regards to the interregional cluster initiative

Within the Strategy we identified market opportunities:

1. Car producers:
 - ⇒ China, India
 - ⇒ EU
 - ⇒ Middle and East Europe
 - ⇒ Russian Federation
 - ⇒ North Africa and Near East
 - ⇒ Brazil
2. Suppliers TIER 1 and TIER 2:
 - ⇒ FIAT's suppliers
 - ⇒ TIER 1 and TIER 2 suppliers in region
3. Networks and Clusters in region:
 - ⇒ Macedonia
 - ⇒ Bosnia and Herzegovina
 - ⇒ Croatia
 - ⇒ Slovenia
 - ⇒ Romania
 - ⇒ Region Trnava in Slovakia
 - ⇒ AC Styria-Austria
 - ⇒ BAIKA-Germany
 - ⇒ ACMA-India.

Opportunities had been identified based on the data available from Global Insight, Roland Berger) and we based on results of the workshop current and future product portfolio of the Serbian automotive suppliers also indicated their specific interest to work more closely with region 5

Objective 3: Cluster development – develop interregional cluster initiative

a. Elaboration of a vision and action plan for the Serbian automotive

VISION AND MISSION

The content of the new strategy AC Serbia showed that the new definitions reflect the further ambitious development of AC Serbia. These terms supply in a narrow spectrum of services in the automotive industry. At Serbia become a part of a global chain of suppliers was not included

that members of AC Serbia operate as closely linked-up global competitive partner in international supplier chain.

The vision and mission are presented in Annex 8.

STRATEGIC GOALS

In this section we defined Key factors of Success:

1. International Identification
2. International Connection
3. The Quality of Mutual Processes of the Internal Organization – Regional Integration
4. The Approach to the External Regional Environment

Also we defined main strategic goals:

Goal	Year 2008 (Base)	Year 2009	Year 2010	Year 2011	Year 2012	Year 2013
Growth of export ratio	/	50%	100%			
Growth of new cluster members	15	10	15	10	10	10
No. of Common Fair Performance	1	1	3	5	5	5
Common R&D projects (Internal and external)	0	1	1	1	1	1
Forming Contact with potential Consumers						

Figures are based on the inputs from AC Serbia members. Base year for projection is 2008. Of course in the current crisis context, the goals relating to the growth of the export ratio and the formation of contacts with potential customers are hard to estimate. For this reason, the planned results will be updated at the end of 2009.

- b. Establishment of the Automotive Cluster South Eastern Europe together with partnering organizations from Slovenia, Croatia, Bosnia and Macedonia. Cluster would perform incorporation of Serbian companies into global supply chain.

ACS' vision is to develop regional network of automotive clusters where regions would share risks and opportunities. The main goal is to offer new business perspectives to the companies joined into clusters and support their entry into global supply chain. The AC Serbia would be involved in coordinating activities in Serbia and disseminating knowledge and the results of these activities within the AC Serbia network and be capacitated to successfully participate in EU funded projects. For the first time, a common stand of South Eastern automotive clusters was designed and presented during ZEPS Intermetal in Zenica in May 2008. Presentation of Slovenian and Serbian automotive industry has taken place on SEE automotive conference during Automechanika exhibition in Frankfurt on September 17th 2008. And last but not least, a proposal for Netherlands government has been prepared to organize business mission of Dutch companies to Slovenian and Serbian suppliers. New business contacts established in Croatia joined initiative for the first time; this was also a showcase of common promotion and business perspective of the SEE region, potential new business for suppliers and new FDI's. Further business opportunities would bring the conference JAMA-

CLEPA (www.jamz-clepa.com), a purchasing conference for Japan their European operations. This conference will take place in Ljubljana Cluster would be presented to Japanese OEMs and European suppliers play an important role.

During 2008, AC Serbia also signed a letter of intent concerning the SEE Automotive Cluster including clusters and initiatives from Bosnia, Croatia, Macedonia and Serbia with the aim to link and integrate it into a regional Southeast European network of automotive component

The initiative was well accepted by all partner organization in the region to share risks and opportunities within the SEE region, which should be in automotive sector.

The following are key outcomes till now:

- 1st common booth at exhibition ZEPS in Zenica, Bosnia – May
- Presentations at SEE Automotive conference in Chamber Germany – August 2008;
- Presentation at SEE Automotive conference at Automechanica
- Establishment of common marketing office called Export 5 companies of participating partners;
- Establishment of cooperation IT portal;

Next steps to be undertaken include:

- 2nd common booth and Matchmaking conference during Automechanica 2009;
- Presentation of the initiative at 1st international conference on Automotive Components in Stuttgart, Germany – May 2009;
- 3rd common booth at European Automotive Components in Stuttgart, Germany – May 2009.

c. **Establishment of cooperation portal www.automotive-see.eu communication and information exchange to promote south Eastern European automotive development intensive supply base with company database.**

Further activities have been performed on communication platform for Eastern Europe www.automotive-see.org; Test version of website is already filled with companies data. Our project would have important impact in content agreed by UNIDO project steering committee.

This communication platform would offer easier access to the project for companies interested in all kind of cooperation with companies and R&D companies in specific countries. This would directly lead to integration of automotive chain as well as incorporation into SEE automotive cluster. User of the IT portal would be able to find a partner according to needs and other options available in company profile. Besides that, all relevant

cluster and regions will be available too, as well as list of events and initiatives. Intranet would be available as tool for document system as well as for communication between clusters in the region. All partners are very interested in using portal and the companies are currently updating their profiles on the IT portal.

d. Delegation of AC Serbia member companies visit to Slovenia

The draft program for a 2 and half day visit to ACS and its member companies (Annex 9) has been defined together with Mr. Vratonjić and Mr. Vijatov. Main goal of the delegation trip is to strengthen cooperation between Serbian and Slovenian companies and to learn from Slovenian best practices. The visit will take place in first quarter of 2009, depending on the possibilities of the AC Serbia companies to travel to Slovenia.

e. Organization of seminars for AC members - New product development

2 day training had been organized in Belgrade from February 5th and 6th for AC Serbia members (Annex 10).

The aim of the workshop was to present to member companies of AC Serbia the main processes, content, rules and methods of product development in automotive industry. The workshop focused on specific knowledge needed by those Tier 1 and Tier 2 suppliers that are aiming to succeed in automotive industry not only as »built-to-print« producers but also as development suppliers to the best OEMs in industry.

Since Serbian companies have clear strategies of becoming Tier 1/2 suppliers in European automotive supply chains it was important to present current trends in automotive industry in general. Special attention was paid to R&D outsourcing activities of OEMs.

The R&D process was presented in great detail, starting from concept development activities to the PPAP approval process.

An important part of workshop content was a detailed presentation of basic conditions that every Tier 1/2 supplier must fulfill in the fields of equipment (CAD, CAE, CAx), knowledge and R&D technologies.

The workshop was based on real best practice examples of the leading European OEMs and Tier1 suppliers (PSA, BMW...).

The active participation of all participants attested to the great interest of Serbian automotive industry in the subjects presented and their readiness to learn and to be informed about latest developments in automotive industry.

Key outcomes: Participants learned and understood concepts, systems and tools related to the Product Development Process, Optimization Methods in Product Development, basic principles of R&D Cooperation and Advanced Product Quality Planning.

**f. Sharing networking channels with AC Serbia for esta
cooperation and partnerships**

At first we planned Guidelines on the base of institutional and pe
Expert. Together with Serbian Experts we decided that guidelines are
enough experience through capacitation on strategy developmen
incorporated.

CONCLUSIONS AND RECOMMENDATIONS

- Enterprise upgrading – implemented by individual companies coaching

A good team in Serbia regarding enterprise upgrading has now developed, which also forms a good basis for undertaking capacity building activities related to other sub-objectives. Intermediate results under this sub-objective were in line with expectations. The participating companies signed MoU and after the preparation of training materials, two successful seminars on Process of Continuous Improvement for the CEOs and internal company counselors were carried out. After the first seminar, counseling work started in selected companies with shop-floor visits. The work of the counselors was assisted and evaluated by an international expert, and later the work done was presented to participating companies on a cluster review meeting to share experience and learn together.

Although some companies are currently working in very difficult circumstances, all participating companies are showing improvements. Results to date are shown in table in Annex 5. At the same time some failures and deviations have to be pointed out. The level of capacity utilization is not very high and the production is not stable due to a lack of orders and the ongoing privatization process. In such a context, improvements are difficult to implement and the companies have not yet started to use the tools PCI or CAPD, which is also the theme of 1st part. A lack of equipment to measure improvement is also a major impediment. To improve their quality, lower their costs, etc., it is thus necessary to build a database and define the key indicators for the level of utilization of the (smaller) companies. More generally, the training provided has to be deepened and intensified, especially in the quality, design and innovation.

- Capacity building – upgraded capacity for the support institutions and Cluster development - development and linkage with interregional cluster initiative

Activities related to capacity building of support institutions and the development of a cross-border cluster have not led to the expected results. This is not due to the performance of AC Serbia staff, but rather related to the low level of capacity utilization of the companies and their motivation to actively participate in the capacity building process. As mentioned above, this is due to a lack of orders and the ongoing privatization process. Nevertheless, and especially in last period, the situation is improving and better results have been achieved, e.g. active participation of companies in developing the AC Serbia strategy as well as in the identification of potential project ideas for new joint product development.

The strategic analysis of the competitive position of the Serbian auto cluster has provided good inputs to upgrade the Strategy. Based on very interactive sessions of the workshop, one of key challenges pointed out was a need to facilitate collaborative RTD projects between companies and academia. In return, research support organizations, e.g. Faculty of Technical Sciences, Novi Sad, confirmed their interest to be actively involved in future cluster development activities. This process has been additionally supported by the first workshop on new product development that was organized to present the methodology. A second one for companies and support institutions should follow in the spring to focus on the identification of project ideas, the process of preparing project proposals as well as consortium building.

Overall, the capacity of the Serbian cluster has been upgraded through ACS, including through the provision of guidance for capacity management, technology innovation, raising awareness of the industry through management through cooperation with UNIDO NCC, and exploring the preparation of Serbian suppliers to be integrated into global supply activities related to the SEE automotive cluster.

To promote the formation of an interregional cluster, companies in Serbia for them to be ready to participate in such an initiative. Future activities should place greater emphasis on linking enterprises in the region.

In addition, FIAT has been planning to invest in the ex-ZASTAV plant, which has strategic importance not only for the Serbian automotive industry, but also for the industry and society. Due to the global crisis in the automotive industry, the investment has been postponed by nine months, which has negatively affected the motivation of companies. At the same time however, this postponement could be seen as a critical opportunity for companies to improve their performance and to qualify for the FIAT network. The real opportunity is not to merely become a local FIAT supplier, but to become part of the FIAT network and later also to suppliers of other OEMs. Thus, to be able to integrate into the global automotive industry, follow-up activities should strive to help Serbian OEMs present in the SEE region in a more active and direct manner.

To achieve the main project objectives, the activities that have already been implemented and results achieved thus far and to further deepen and intensify existing activities.

Enterprise upgrading – to be implemented through individual companies

- ⇒ Third workshop for process of continuous improvement joined with international experts
- ⇒ Two visits of international experts to follow-up on the counseling activities with national experts
- ⇒ Continuation of counseling activities in participating companies
- ⇒ Organization of a final cluster conference in June 2009 with government institutions to present the outcomes and company capabilities learned and set the way forward
- ⇒ Preparation of required materials for final conference
- ⇒ Organize a School of quality for AC Serbia members, consisting of a final exam (including seminar about ISO TS 16949)
- ⇒ School of CAD/CAM advanced methods in designing new product with a focus on:
 - Mold and tooling development in automotive industry
 - PLM systems in automotive industry – Smart Team as a model
 - Global cooperation in automotive industry
 - Basis of product design process in automotive industry
 - Training SCM in automotive industry
 - Training SPC in automotive industry

Capacity building – upgraded capacity of support institutions

- ⇒ Enhanced cooperation with R&D institutions and academia
- ⇒ Workshops on environmentally friendly production in cooperation with UNIDO NCPC in Serbia
- ⇒ Fostering training and service delivery capabilities of Serbian company counselors (Study tour to European clusters)
- ⇒ Training of AC Serbia staff on joint purchasing based on ACS experiences
- ⇒ Training on strategic planning in automotive industry for companies and cluster staff
- ⇒ Preparation of an annual business plan for AC Serbia members
- ⇒ School of project management in automotive sector for companies and cluster staff
- ⇒ Workshop for the identification of common projects within Serbia and with South-eastern Europe automotive network
- ⇒ Workshop for applications on national and EU calls
- ⇒ Involve FIAT and other OEMs present in the region more actively and directly in AC Serbia activities

Cluster development – development and linkage with interregional cluster initiative

- ⇒ Finalization of the AC Serbia Strategy (e.g. including a mapping of suppliers...)
- ⇒ Delegation tour of Serbian companies to Slovenia to establish business linkages, acquire skills and understanding of best practices
- ⇒ Organization of joint matchmaking conference with regional partner clusters within the scope of Belgrade Auto-show in March 2009
- ⇒ Workshop for the identification of common projects within Serbia and with South-eastern Europe automotive network
- ⇒ Organization of a final cluster conference in June 2009
- ⇒ UNIDO Centre for South-South Industrial Cooperation in Beijing could be linked up with project, possibly providing some seed money for future cooperation activities between Serbia, Slovenia and Asia – preparation of the workshop where ideas could be envisaged with participation of Slovenian companies already producing in Asia

Annexes 1-10

Annex 1

Table 1: List of companies who signed the Memorandum of Understanding

No.	Company
1.	21. OKTOBAR
2.	BIN METAL ČAČAK
3.	CIMOS – LIVNICA KIKINDA
4.	FAD
5.	FADIP
6.	FKL
7.	FRITECH
8.	KNOTT AUTOFLEX YUG
9.	RS PARTNERS PES A.D.
10.	SINTER
11.	TPV ŠUMADIJA
12.	TURBOSERVIS
13.	TRAYAL

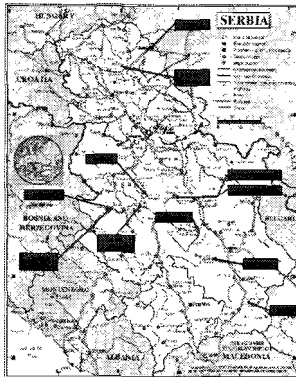


Table 2: Companies by employees and turnover

Company	Employees	Turnover (in mio €)
ZI. Oktobar	500	5,80
BIN METAL ČAČAK	11	0,20
CIMOS – LIVNICA KIKINDA	1.135	28,90
FAD	324	6,20
FADIP HKC	170	2,50
FKL	580	12,00
FRITECH	6	0,30
KNOTT AUTOFLEX YUG	80	5,00
RS PARTNERS PES A.D.	200	2,10
SINTER	200	2,30
TPV ŠUMADLJA	97	1,70
TRAYAL	2.300	41,00
TURBOSERVIS	40	0,75

Annex 2

Detailed program of the seminar:



SECOND SEMINAR ON INITIATING SAP's in SERBIAN

Kragujevac 19th – 20th January 2009

Monday, 19th January 2009

09.30 – 10.00 Arrival of participants

WORK OVERVIEW IN THE FIRST PART OF INITIATING PSP IN SERB

10.00 – 10.30 Report on the project performance in the first part (

10.30 – 12.30 Enterprises reports - the results, good examples, pro

12.30 – 12.45 Coffee break

12.45 – 13.30 Enterprises reports - continue discussion

13.30 – 14.00 Break

WORKSHOPS OF THE SECOND SEMINAR (Mi

14.00 – 15.30 Workshop – QUALITY IMPROVEMENT

Display of dealing with more complex problems of quality with assist teams

15.30 – 15.45 Break

15.45 – 17.00 Workshop – QUALITY IMPROVEMENT – contin

Final Report on contract 16001665



SECOND SEMINAR ON INITIATING SAP'S in SERBIAN ENTERPRISES

Kragujevac 19th – 20th January 2009

Tuesday, 20th January 2009

WORKSHOPS OF THE SECOND SEMINAR

(Milan Bavec)

09.30 – 11.00	Workshop – costs rationalization View of costs rationalization for products, organizational units and enterprises as a whole, with assistance of KMD and expert teams.
11.00 – 11.15	Coffee break
11.15 – 12.45	Workshop – costs rationalization, continued
12.45 – 13.30	Break
13.30 – 15.00	Workshop – Accuracy and delivery flexibility Display of customer requirements in the area of delivery, organization, tracking accuracy in the delivery of the company
15.00 – 15.15	Coffee break
15.15 – 16.45	Workshop – proposed improvements system I&I. Display of model and rules for the stimulation of ideas and innovations, with foreign associates.
16.45 – 17.00	Conclusion

Annex 3

The 1st round visit was organized in the following companies:

Ad	Company
1.	ZI. OKTOBAR
2.	BIN METAL ČAČAK
3.	CIMOS – LIVNICA KIKINDA
4.	FAD
5.	FRITECH
6.	KNOTT AUTOFLEX YUG
7.	RS PARTNERS PES A.D.
8.	SINTER
9.	TPV SUMADIJA
10.	TRAYAL
11.	TURBOSERVIS

The 2nd round visit was organized in the following companies:

Ad	Company
1.	BIN METAL ČAČAK
2.	FAD
3.	FRITECH
4.	RS PARTNERS PES A.D.
5.	SINTER
6.	TURBOSERVIS

Annex 4

Detailed program of the seminar:



SEMINAR

Implementation of the Process of Continuous Improvements (PCI) in the companies in Serbia
Kragujevac, from 1st until 3rd October 2008

PROGRAMME

Wednesday, 1st October, 2008

09:30 – 10:00 Arrival and Registration
10:00 – 10:15 Introductory address and Welcome to participants Mr. Igor Viatov

INTRODUCTORY SEMINAR FOR MANAGERS AND EXPERTS FROM THE COMPANY

11:15 – 11:45 Concepts, Systems, Tools Mr. Milan Bavec
11:45 – 12:00 Coffee Break
12:00 – 13:30 Implementation of the PCI in the companies Mr. Milan Bavec
✓ Decision for exchange, objectives
✓ Workshop, Evaluation Request
✓ Base preparation
✓ Pilot Introduction
13:30 – 14:00 Lunch
14:00 – 15:30 Implementation of the PCI in the companies Mr. Milan Bavec
✓ Systems of Improvements (S5, Visualization,
Standardization, Goals Forming, Improvements)
✓ Expansion Learned Items
15:30 – 14:45 Coffee Break
15:45 – 16:30 Working Plan in the Companies
Discussion
Conclusion

SEMINAR FOR THE COMPANIES

Thursday, 2nd October, 2008

09:30 – 11:00 Advanced discussion about contents of the 1st day Mr. Milan Bavec
11:00 – 11:15 Coffee Break
11:15 – 12:45 Workshop – Work Groups – Mini Companies (MC) Mr. Milan Bavec
12:45 – 13:30 Lunch
14:00 – 15:30 Workshop – Work Groups – Mini Companies Mr. Milan Bavec
Questionnaire about possibilities of Implementation MC
in the companies
15:00 – 15:15 Coffee Break
15:15 – 16:30 Workshop – Process Improvements CAPD Mr. Milan Bavec

Friday, 3rd October, 2008

09:30 – 10:30	Workshop 55
10:30 – 10:45	Coffee Break
10:45 – 12:15	Plan and method for working in the companies
	Discussion
	Conclusion

UNIDO Technical Experts:

Ms. Maja Pešič Rakanović
 Mr. Milan Bavec – ACS Slovenia
 Mr. Igor Vijatov – ACS Serbia
 Mr. Dejan Vratonjić – AC Serbia

List of participants:

No.	Name	Company	No.	Name
1.	Dragan Antonić	21. Oktobar	15.	Jovanka Milovano
2.	Ivan Dondur	21. Oktobar	16.	Jovan Boberić
3.	Zoran Pavlović	21. Oktobar	17.	Vladislav Radosav
4.	Igor Vijatov	AC Serbia	18.	Borivoje Paunović
5.	Marsel Simonović	AC Srbia	19.	Maja Pešič Rakan
6.	Dejan Vratonjić	ACS Serbia	20.	Petar Koruga
7.	Milan Bavec	ACS Slovenia	21.	Dragan Knežev
8.	Ivan Čvrkić	BIN Metal	22.	Mija Milutinović
9.	Vladan Čvrkić	Bin Metal CEO	23.	Miloš Gordić
10.	Miomir Stojkov	CIMOS	24.	Siobodan Jevtić
11.	Tatjana Ješić	CIMOS	25.	Goran Vasiljević
12.	Mileta Bogradonović	FAD	26.	Zoran Novaković
13.	Zoran Vuksanović	FAD	27.	Andrej Kolarić
14.	Dragiša Ristić	FAD CEO	28.	Manja Čitić

1st round company visits with following contents:

Company	Visit date	Content
FAD	13.10.2008.	<ul style="list-style-type: none"> • Short audit of producer processes • Presentation of key indic operational performance • Selection of appropriate process of continuous im • Definition of MD – mini v
BIN METAL	16.10.2008.	
SINTER	19.10.2008.	
TURBO SERVIS	18.10.2008.	
FRITECH	11.11.2008.	
TRAYAL	14.11.2008.	
21.OKTOBAR	13.11.2008.	
RS PARTNERS PES	13.10.2008.	
CIMOS Ljvnica AD	18.10.2008.	
KNOT	14.11.2008.	
TPV Sumadja	16.11.2008.	

Final Report on contract 16001665

2nd round company visits with following contents:

Company	Visit date	Content
FAD	20.10.2008.	<ul style="list-style-type: none"> • Presentation of 5S • Analysis of previous tasks and detailed explanation of all 5S steps
BIN METAL	21.10.2008.	
SINTER	22.10.2008.	
TURBO SERVIS	23.10.2008.	
FRITECH	11.11.2008.	
TRAYAL	05.11.2008.	
21.OKTOBAR	13.11.2008.	
RS PARTNERS PES	20.10.2008.	
CIMOS Livnica AD	24.10.2008.	
KNOT	04.11.2008.	
TPV Sumadija	06.11.2008.	

3rd round company visits with following contents:

Company	Visit date	Content
FAD	20.11.2008.	<ul style="list-style-type: none"> • Review status of 1S and check all tasks from previous visiting • Detailed explanation of 2S
BIN METAL	25.11.2008.	
SINTER	24.11.2008.	
TURBO SERVIS	23.11.2008.	
FRITECH	2.12.2008.	
21.OKTOBAR	27.11.2008.	
RS PARTNERS PES	19.11.2008.	
CIMOS Livnica AD	01.12.2008.	
KNOT	23.12.2008.	
TPV Sumadija	08.12.2008.	

4th round company visits with following contents:

Company	Visit date	Content
FAD	09.12.2008.	<ul style="list-style-type: none"> • Review status of 1S/2S, review other tasks • Visiting each area • Explanation of Established Key Performance Indicators in the company to track the progress during the program.
BIN METAL	10.12.2008.	
SINTER	24.12.2008.	
TURBO SERVIS	23.12.2008.	
FRITECH	30.12.2008.	
21.OKTOBAR	08.12.2008.	
RS PARTNERS PES	25.12.2008.	
CIMOS Livnica AD	26.12.2008.	
KNOT	29.12.2008.	
TPV Sumadija	14.01.2008.	

Annex 5

IMPROVEMENT SINCE FIRST TO SECOND SEMINAR

Company	Analysis status of appreciation	Team for SPS	Education for PSP	Plan of improvement	Key Indicators	Estab. MD.
21. Oktober	X	X	X		X	5
Bin Metal		X	X		X	1
FAD	X	X	X	X	X	1
Knott Autoflex	X	X	X	X	X	7
Sinter						1
TPV Surmedija		X	X	X	X	
Trayal			X		X	
Turbo Sevens	X	X	X	X	X	8

Problems encountered and performance in participating companies:

Company: 21. Oktobar d.o.o. **Phone:** +381-34-334 588
Street: Dragoslava Srejavica 54 **Fax:** +381-34-335 703
Town: SRB-34000 Kragujevac **Email:** dp2lokt@eunet.yu
Manager: Goran Stojkovic **Web:** www.21oktobar.co.yu

Production program: Light equipment, heat exchangers, steering wheels, bumpers and plastic parts, tooling
Quality standards: ISO 9001:2000
Employees (2007): 500
Turnover (2007): EUR 5.8 Mio.
Founded: 1962
Ownership: state owned, in restructuring process

Problems encountered: This company doesn't have so many customers. They used to produce parts for Yugo - Zastava but when FIAT bought Zastava plant, FIAT stopped to produce YUGO.

Departments of implementation: whole company
Performance: 5 Working groups (zones) have been established and team leaders were determined. Improvement of production plan realization (from 6 in October to 7 in December, target: 8)

Statements/photos: *"Every month we feel like our shop floor is bigger and bigger, but we only remove unnecessary things."*

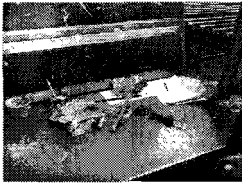
Company: Bin Metal d.o.o. **Phone:** +381-32-342 142
Street: Svetozara Markovica 52 **Fax:** +381-32-223 776
Town: SRB-32000 Cacak **Email:** binmetal@eunet.yu
Manager: Vladan Cvrcic **Web:** www.binmetal.co.yu

Production program: Different types of springs
Quality standards: 11
Employees (2007): EUR 0.2 Mio.
Turnover (2007): 1993
Founded: private
Ownership:

Problems encountered: At the start of 2009 they had to reduce the quantity of production due to the crisis

Departments of implementation: whole company

Statements/photos: *"Now my wife is surprised every day, when I come home I start to put things in order"*



Company: Livnica Kikinda Ai d.o.o.
Street: Milosevacki put 34
Town: SRB-23300 Kikinda
Manager: Franko Vizeratin

Phone: +381-230 422 862
Fax: +381-230 434 187
Email: info.lk-ai@cimos.eu
Web: www.cimos.eu

Production program:
Quality standards:
Employees (2007):
Turnover (2007):
Founded:
Ownership:

Castings for engines, turbochargers,
ISO 9001:2000, ISO TS 16949
1.135
EUR 28.9 Mio.
1935
private

Problems encountered:

The global crises started to affect t
also brought along personal change
for the UNIDO programme was mo'
contact person still needs to be appo
Department "Insert"

Departments of implementation:



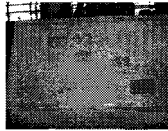
Company: FAD d.d. **Phone:** +381-32 725290
Street: Kneza Aleksandra 210 **Fax:** +381-32 725 163
Town: SRB-32300 G. Milanovac **Email:** fad@eunet.yu
Manager: Dragisa Ristic **Web:** www.fad.co.yu

Production program: Steerings and suspension parts
Quality standards: ISO 9001:2000
Employees (2007): 324
Turnover (2007): EUR 6.2 Mio.
Founded: 1961
Ownership: private

Problems encountered: No problems encountered; the company accepted the programme very well.

Departments of implementation: whole company

Photos:



Company: Fadip HKC d.o.o. **Phone:** +381-21 6912679
Street: Industrijska zona b.b. **Fax:** +381-21 6913 344
Town: SRB-21220 Becej **Email:** fadiphkc@eunet.yu
Manager: Drago Pejic **Web:** www.fadiphkc.co.yu

Production program: Hoses for hydraulic brakes and fuel
Quality standards: ISO 9001:2000, ISO TS 16949
Employees (2007): 170
Turnover (2007): EUR 2.5 Mio.
Founded: 1979
Ownership: private
Problems encountered: n/a
Departments of implementation: n/a

Company: EKL d.d. **Phone:** +381-21 6841100
Street: Industrijska zona b.b. **Fax:** +381-21 842808
Town: SRB-21235 Temerin **Email:** marketing@ekl-serbia.com
Manager: Mihvoje Mjuskovic **Web:** www.ekl-serbia.com

Production program: Ball and roller bearings, cardan shafts/joints

Quality standards: ISO 9001:2000, ISO 14001/2001
Employees (2007): 580
Turnover (2007): EUR 12.0 Mio.
Founded: 1961
Ownership: private
Problems encountered: n/a
Departments of implementation: n/a

Company: Fritech
Street: Industrijska zona b.b.
Town: SRB-18400 Prokuplje
Manager: Borivoje Paunovic
Phone: +381-27 329717
Fax: +381-27 323101
Email: fritech@ptt.yu
Web: www.fritech.co.rs

Production program: Friction materials, disc pads, brake
Quality standards: ISO 9001:2000
Employees (2007): 6
Turnover (2007): EUR 0.3 Mio.
Founded: 2002
Ownership: private

Problems encountered: They used to produce parts for Y
bought the Zastava plant, it stopped
Departments of implementation: whole company

Photos:



Company: Knott Autoflex YUG d.o.o.
Street: Industrijska zona b.b.
Town: SRB-21220 Becej
Manager: Petar Koruga
Phone: +381-21 6915118
Fax: +381-21 6915993
Email: autoflex@stcable.co.yu
Web: www.autoflex.co.yu

Production program: Torston axles and other parts for all
Quality standards: ISO 9001:2000
Employees (2007): 80
Turnover (2007): EUR 5.0 Mio.
Founded: 2003
Ownership: private

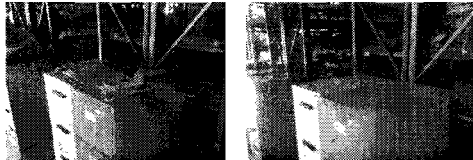
Problems encountered: No problems encountered; the company accepted the programme very well.
Performance: 7 Working groups (zones) have been established and team leaders were determined. Customer complaints decreased from 27 (September) to 4 (December).
Departments of implementation: whole company
Statements/photos: "Now we are aware how important is to follow up reclamations and cost of reclamations"

Company: RS Partners PES a.d. **Phone:** +381-17 815010
Street: Belo polje b.b. **Fax:** +381-17 815810
Town: SRB-17530 Surdulica **Email:** pes@pti.yu
Manager: Blagoje Stojanovic **Web:** www.rspartnerspcs.com

Production program: Small size electric motors, tools
Quality standards: ISO 9001:2000
Employees (2007): 200
Turnover (2007): EUR 2.1 Mio.
Founded: 1962
Ownership: private

Problems encountered: The company stopped production after the New Year, because of the crisis. They believe they will start with production at the end of March
Departments of implementation: whole company

Statements/photos: "Before you convince us to look around we didn't have idea how many unnecessary things we have."



Company: Sinter a.d. **Phone:** +381-31 592203
Street: M. Obrenovica 2 **Fax:** +381-31 563462
Town: SRB-31000 Uzice **Email:** sjvtic@sinter.co.yu
Manager: Miliivoje Mjuskovic **Web:** www.sinter.co.yu

Production program: Sintered parts
Quality standards: ISO 9001:2000

Employees (2007): 200
Turnover (2007): EUR 2.3 Mio.
Founded: 1961
Ownership: private

Problems encountered:

This company suffers severe financial problems only in small quantities
"I feel good, because now I feel we are for our company."

Statements/photos:



Company: TPV Sumadija d.o.o. **Phone:** +381-34 501670
Street: Industrijska zona b.b. **Fax:** +381-34 501671
Town: SRB-34000 Kragujevac **Email:** d.dragutinovic@tpv.si
Manager: Andrej Kolaric **Web:** www.tpv.si

Production program: Engine parts, engine gaskets
Quality standards: ISO 9001:2000
Employees (2007): 97
Turnover (2007): EUR 1.7 Mio.
Founded: 2005
Ownership: private

Problems encountered:

No problems encountered; the company is very well.

Departments of implementation:

whole company

Photos:



Company: Turbo Servis **Phone:** +381-31 562 333
Street: Industrijska zona b.b. **Fax:** +381-31 562233
Town: SRB-31000 Uzice **Email:** turbos@ptt.yu

Final Report on contract 16001655

Manager: Nikodin Vejovic

Web: www.turboservis.co.yu

Production program:

Turbochargers, ventilators, water pumps, intercoolers

Quality standards:

ISO 9001:2000

Employees (2007):

40

Turnover (2007):

EUR 0.75 Mio.

Founded:

1983

Ownership:

private

Problems encountered:

No problems encountered; the company accepted the programme very well.

Departments of implementation:

whole company

Photos:



Company: TRAYAL

Phone: +381-1102449444

Street: Milosa Obilica b.b.

Fax: +381-11 2437775

Town: SRB-37000 Krusevac

Email: trayalbg@rsbest.net

Manager: Gordana Klasnja

Web: www.trayal.net

Production program:

Tyre production, technical rubber parts

Quality standards:

ISO 9001:2000

Employees (2007):

2300

Turnover (2007):

EUR 41.0 Mio.

Founded:

1889

Ownership:

private

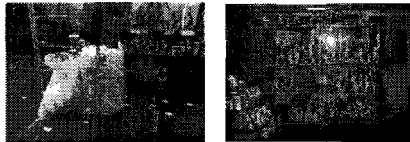
Problems encountered:

The company was forced to stop production two times in the course of the programme; now it is producing. The company has good prospects of becoming a future supplier of FIAT.

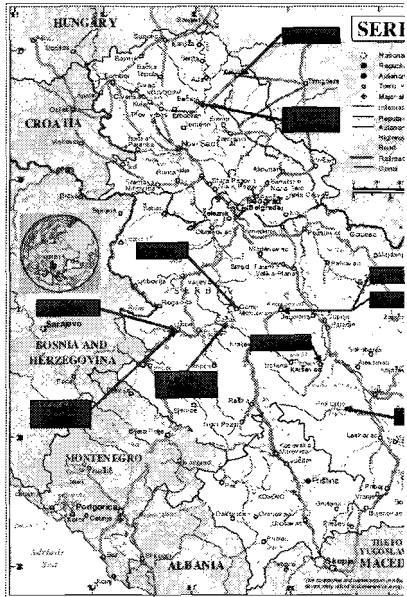
Departments of implementation:

Tyre production

Photos:



Location of participating companies:




Final Report on contract 16001865

Annex 6

	Competitive position of Serbian automotive components industry
	<p>Moderation Dušan BUŠEN, Director of Automotive Cluster Slovenia (ACS), Ljubljana</p> <p>Designated Participants:</p> <ol style="list-style-type: none">1. Dejan JOVANOVIĆ, State Secretary, Ministry of Economy and Regional Development2. Mihajlo VESCOVIĆ, Vice-President of the Serbian Chamber of Commerce3. Zorica MARIĆ, Head of Department, Ministry of Economy and Regional Development4. Manuela BOESENHOFFER, UNIDO, Cluster and Business Linkages Unit5. Vladimir TOMIĆ, Advisor, Serbian Investment & Export Promotion Agency6. Biljana SLAVKOVIĆ, Advisor, Vojvodina Investment Promotion7. Goran ĐAČIĆ, Director, Serbian Agency for the Development of Small and Medium-sized Enterprises and Entrepreneurship8. Representative of Regional Economic Development Agency for Šumadija and Pomoravlje, Kragujevac9. Tomislav KNEŽEVIĆ, Project Manager, GTZ/WBF Serbia, Belgrade10. Aleksandar STOJKOV, USAID Serbia, Belgrade11. Representatives from Serbian R&D Institutions and Universities12. AC Serbia Member Companies CEOs

Annex 7

	<p>Upgrading capacity of supporting R&D institut</p> <p>Moderation Dušan BUŠEN, Director of Automotive Cluster Slovenia (ACS), Ljubljana</p> <p>Designated Participants:</p> <ol style="list-style-type: none">1. Dejan JOVANOVIĆ, State Secretary, Ministry of Economy2. Mihajlo VESOVIĆ, Vice-President of the Serbian Chamber of Commerce3. Zorica MARJČIĆ, Head of Department, Ministry of Economy4. Vladimir TOMIĆ, Advisor, Serbian Investment & Export Agency5. Biljana Slavković, Advisor, Vojvodina Investment Promotion Agency6. Goran DŽAFIĆ, Director, Serbian Agency for the Development of Small and Medium Enterprises and Entrepreneurship7. Nenad POPOVIĆ, Head SME Development Department, Ministry of Economy and Regional Development, Kragujevac8. Tomislav KNEŽEVIĆ, Project Manager, GTZ/WBF Serbia9. Aleksandar STOJKOV, USAID Serbia, Belgrade10. Representatives from Serbian R&D Institutions and Universities11. CEOs of AC Serbia members
---	---

Annex 8

AC Serbia Strategy

Outline (A full Serbian language version is available upon request)

- 1 Mission and activities of AC Serbia**
 - 1.1 Mission AC
 - 1.2 Activities of AC Serbia
- 2 Vision and strategic goals**
 - 2.1 Vision
 - 2.2 Strategic goals
 - 2.3 Rules
- 3 Members of AC Serbia**
- 4 Current Situation in AC Serbia**
 - 4.1 Number of members
 - 4.2 Share of SMS
 - 4.3 Financing
 - 4.4 Organization of AC
 - 4.4.1 Organizational Model, Growth and Internal structure of AC
 - 4.4.2 Principles and Conclusions for operative organization
 - 4.4.3 Infrastructure
 - 4.5 Expected and actual benefits for the members
- 5 Evaluation of development and Competitive position of automotive supplier industry**
 - 5.1 Comparison of competitiveness in Automotive Supplier Industry activities of AC Serbia and EU
 - 5.2 Evaluation of the Technology Pretentiousness of the members of AC Serbia
 - 5.3 New Products Development
- 6 External Environment – Opportunities and terms for development of Serbian automotive supplier Industry in EU market and other international markets**
 - 6.1 Integration Process in Automotive Supplier Industry
 - 6.2 Additional marketing opportunities for AC Serbia
- 7 Internal Environment – review of customers, passenger and commercial vehicles supply situation and expected growth**
 - 7.1 Facts about automotive Industry in Serbia
 - 7.2 Main customers of the AC Serbia members
 - 7.3 Supply situation in AC Serbia
 - 7.4 Catalogue of Suppliers
- 8 Innovational potentials thought internal and external connection of AC Serbia and Review of actual projects for products and technology development**
 - 8.1 Member connecting of AC with Institution and/or technological Centers inside and outside of AC Serbia
 - 8.1.1 Connections situation in Serbia

8.1.2 Challenges

8.2 Review of actual proposals R&D projects for product and technology de

9 Main elements of Business Policy

10 Work Plan for period 2009 – 2010

11 Promotion

Sources

VISION AND MISSION – Old and new

Vision of AC Serbia was synchronized with the vision of the automoti

Old Vision: Serbian automotive suppliers and equipment provider automotive industry.

New Vision: AC Serbia sees itself as a central networked au component parts in Serbia, who have become part of international su

Old Mission: AC Serbia offers support to its members at accele reaching their profitable positioning in the global vehicle manufa indirectly increase improvement of economic situation of whole sector.

New Mission: Business Connecting and networking of scientifi institutions will help to create synergies, launching joint developme quality and create a recognizable brand. This will also cont competitiveness of our members internationally.

Annex 9

Draft program of the Delegation of AC Serbia member companies visit to Slovenia

1st DAY

14:00 – 15:00	Arrival to Koper
15:00 – 15:30	Introduction – Quality and Project Management in Automotive Industry
15:30 – 17:30	Project Management for Experts from Automotive Industry
19:30 -	Dinner

2nd DAY

09:00 – 11:00	Quality Development in the companies from Automotive Industry
11:00 – 12:00	Visit the production of company CIMOS – Tier 1 supplier (Quality Tools Implementation)
12:00 – 14:00	Lunch
15:00 – 16:00	Visit the production of company CIMOS – Tier 1 supplier (Quality Tools Implementation)
19:00 -	Dinner

3rd DAY

08:00 – 10:00	Transfer to Mirna
10:00 – 12:00	Visit the production of company PREVENT – Tier 2 supplier (Quality Tools Implementation)
12:00 – 14:00	Lunch
14:00 -	Return to Serbia

Annex 10

PROGRAM February 5th - 6th

1st DAY

15:00 – 15:15	Introduction, Workshop objectives
15:15 – 16:15	<ul style="list-style-type: none">- General about today's Automotive Industry and its<ul style="list-style-type: none">o Automotive industry todayo R&D in automotive industryo Challenges / strategies of OEMs and supplierso The future of Tier1/Tier2 suppliers in automotiveo Platforms, moduleso Tier1/Tier2 suppliers – R&D roadmap
16:15 – 16:30	Coffee break
16:30 – 17:30	<ul style="list-style-type: none">- Product Development Process<ul style="list-style-type: none">o How to enter the club?o Entrance conditions
17:30 – 17:45	<ul style="list-style-type: none">- 1st Day Summary

2nd DAY

09:00 – 09:30	Introduction, 1st Day Summary
09:30 – 10:15	<ul style="list-style-type: none">- Product Development Process<ul style="list-style-type: none">o R&D processo ISO TS 16949 requirements for R&D processo APQP - Advanced Product Quality Planning
10:15 – 10:30	Coffee break
10:30 – 12:00	<ul style="list-style-type: none">o Specific «APQP» requirements - differenceso Basic R&D cycleo RFQ → Offer → Order
12:00 – 13:30	Lunch
13:30 – 14:45	<ul style="list-style-type: none">o Optimization Methods in Product Developmento QFD, DFMEA, DFSS, ...o Other Aspects of Product Development Process
14:45 – 15:00	Coffee break
15:00 – 16:00	<ul style="list-style-type: none">- R&D b2b examples
16:00 – 16:30	<ul style="list-style-type: none">- Workshop Summary

