



Innovative model to support innovation development in SMEs RELJA JR, Zrenjanin- Serbia



The project is co-financed by the
European Union

Good neighbours
**creating
common future**

When the company / SMEs has an innovative idea and doesn't know what and how to proceed, then the **Innovation pool** helps.

The basic concept of the INNOVATION POOL ITCMInd idea

- Step 1** - identify a company / SMEs that has innovative potential and an innovative idea
- Step 2** - initiate innovative capacities of the cluster, hire experts for the realization of innovations
- Step 3** - study the problem (for example: technologies, legislation, standards ...) - create an ALGORITHM for solving a concrete innovation
- Step 4** - around an innovative company / SMEs cluster creates a team of experts / institutions necessary for the realization of a particular innovation – INNOVATION POOL
- Step 5** - Innovation pool provides support to the company / SMEs in the development of innovation from idea to commercialization - develops a BUSINESS PLAN for commercialization
- Step 6** - Public presentation of the BUSINESS PLAN, animation of potential investors and collection of funds for the realization of the innovation (jointly working : companies / SMEs, cluster and members of the Innovation Pool)

Innovation pool RELJA JR Zrenjanin

Cluster for Ecological Energy and Ecological Culture "Ecopanonia" (Institution-2 to support the development of Innovation), provides assistance to the development of innovation in terms of:

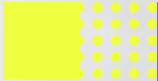
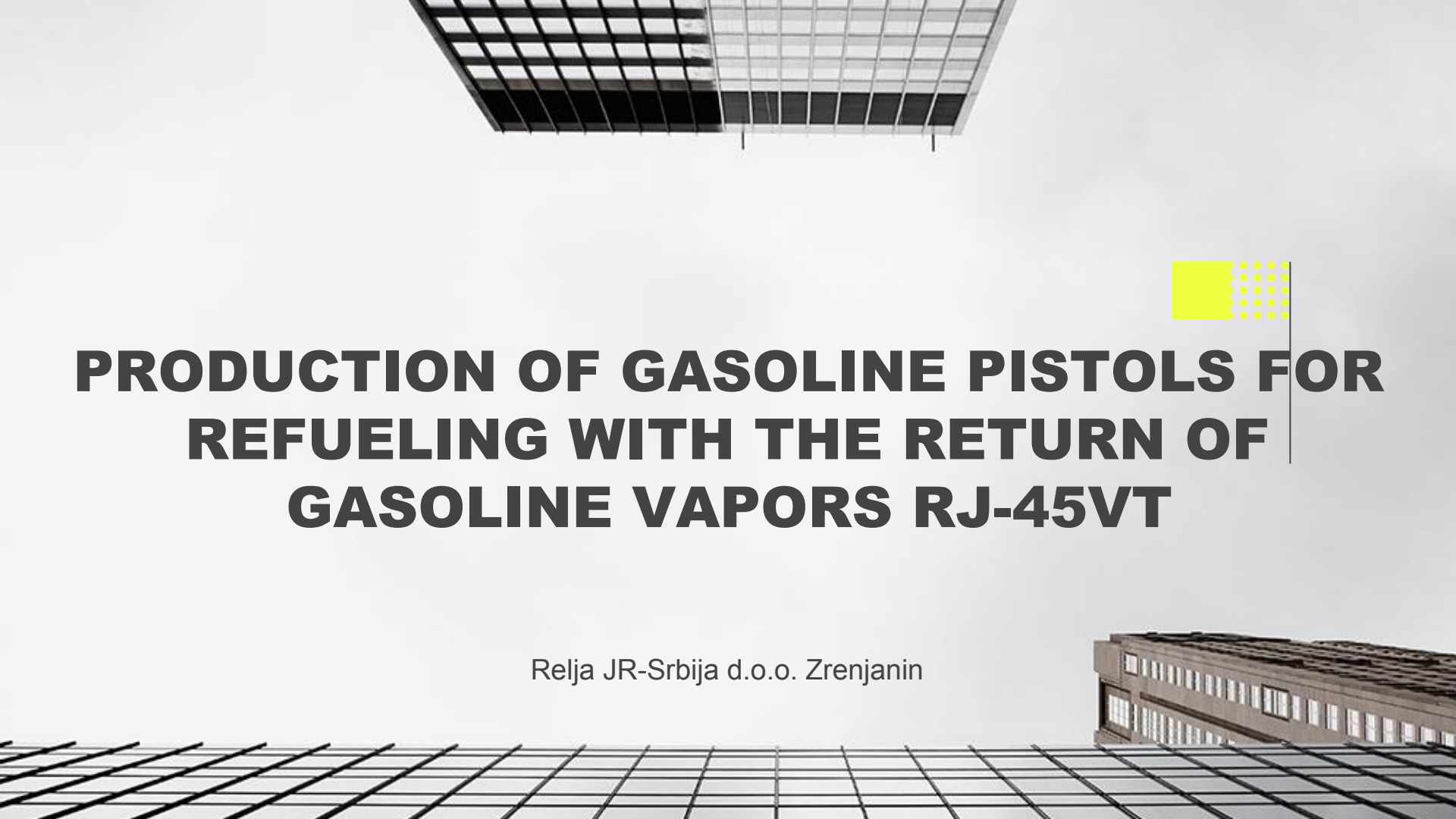
- Ecological justification, which refers to the prevention of gas evaporation during fuel spillage and the consequences of their accumulation in tanks,
- Economic justifications in terms of savings when reducing unnecessary excess fuel spillage, after refueling,
- Development of marketing plan proposals.



Faculty of Mechanical and Civil Engineering Kraljevo

Faculty of Mechanical and Civil Engineering Kraljevo (Institution-1 to support the development of Innovation), provides assistance to the development of innovation in terms of:

- defining the necessary parts for prototyping, with a projection of their cost price,
- defining the necessary tools for the production of parts, with a projection of their cost price,
- defining a quality control laboratory, with a price projection,
- defining the manner of preparation of technical documentation for the production of parts, with their cost price,
- defining the manner of preparation of technical documentation for the development of tools, with a projection of the cost price,
- defining the cost price of the "Fuel Post",
- defining basic risks in the production of parts.



PRODUCTION OF GASOLINE PISTOLS FOR REFUELING WITH THE RETURN OF GASOLINE VAPORS RJ-45VT

Relja JR-Srbija d.o.o. Zrenjanin

OVERVIEW

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ITC MIND PROJECT

The metal sector is a part of value chains of all types of industries. The focus of this project on increasing innovation potential of the metal industry in the Hungary-Serbia border region, as a contribution to the overall competitiveness of small and medium enterprises (SMEs).

DESCRIPTION OF THE PROJECT IN ONE SENTENCE

Organization of the production gasoline pistols for refueling with the return of gasoline vapors RJ-45VT

MAIN OBJECTIVE

To provide to the specific customers innovative, ecological product in accordance to the EU requirements in the supplying of final consumption fuel

TOTAL VALUE OF THE PROJECT (EUR)

223,000

AMOUNT OF FUNDS REQUESTED FROM THE INNOVATION FUND (EUR)

198,000

INDUSTRY/SECTOR

Retail trade of petroleum products

OUR COMPANY



- 22 years of experience in production of electro and machinery components
- 13 year long tradition of manufacturing fuel injection nozzles
- 30 employee
- 3100 m2 covered factory
- 50,000 nozzles (pistols) annually
- The company works in accordance to the EN ISO 3834-3 and EN-1090-3

Production program:

Gas vapor return nozzle, type "ABR" 50 VR - Patent 51513

AB Nozzle type "ABR" 50 Standard - Patent 51524

AB Nozzle type "ABR" 80 Standard - Patent 51524

AB Nozzle type "ABR" 120 Standard - Patent 51524



THE PRODUCT

legal background



According to **EU directive 94/9/EC** i.e. standard **En13012** requirements, in the EU, gasoline only uses pistols that **have a system** that, when refueling, **allows gas vapors from a tank** into which gasoline is pumped to allow these vapors to return to the tank of a gas station where gas vapors condense. The same standard in the form of By-law (Official Gazette Serbia, 1/2013) has been adopted in Serbia with the implementation starting from 01.01.2015. In this By-law it is prescribed:

1. Essential health and safety requirements related to the design and manufacture of equipment and protective systems intended for use in potentially explosive atmospheres, as well as other requirements and conditions that must be fulfilled for their placing or being marketed and/or used.
2. Groups and categories of equipment intended for use in potentially explosive atmospheres; conformity assessment procedures; the contents of the Declaration of Conformity Instructions for use.
3. The contents of the technical documentation; conformity marking and explosion proof sign.
4. The requirements that the conformity assessment body has to fulfill in order to be appointed for conformity assessment.



THE PRODUCT

Our **innovative** gasoline pistols for refueling with the return of gasoline vapors **RJ-45VT** meets the **EU and domestic standards** especially refer to the **environment protection**. The main advantage of our approach to this challenge comparing to the similar products is that our product uses **natural gravitation** instead of electric equipment which is **energy efficiency** and **easy to use and maintain**.



THE PRODUCT

advantages



- Gasoline vapor recovery system
- ECO friendly
- Automatic
- For all type of fuel
- Reduces risk of fire and explosion



TECHNICAL CHARACTERISTICS

- The volume ratio of the intake gasoline vapor to gas flow rate is in the range of 95% to 105%
- Automatic vapor suction
- Maximum flow rate 50 lit / min
- Maximum pressure 3.5 bar
- Two-stage flow control, easy and safe handling
- Automatic shutdown in case of overfilling of car tank
- Valve body made of anti-corrosion material
- Impact resistant alloy-Al spout tube
- Ergonomic valve
- Vent valve weight 1.37 kg
- Connection to the hose is made through the swivel connector of Al and manipulation of the hose is easy and safe
- Hose connector dimensions are: M 34x1,5 - female
- Maintenance free
- 24 months warranty
- Production with different types of handle wraps: Svelm, Meba, Benet, etc.

MARKET

Russia

EU

Middle East



MARKET

EU



- **400,000 petrol guns sold annually**
- **\$ 63,000,000 market value**

V Gas vapor return nozzles (type “ABR” 50VR)
(Vapor Recovery Nozzle) about 250,000 pieces at
an average price of \$ 195; total value \$ 48,750,000

Standard Nozzles standard (50 lit / min, 80 lit / min
and 120 lit / min) - about 150,000 pieces at an
average price of \$ 95; total value: \$ 14,250,000

- **Competitor: HIBY ELAFLEX**

PROJECT FINANCIAL FORECAST

	2020	2021	2022	2023	2024
Total Revenue (EUR)	575,000	1,035,000	1,610,000	2,300,000	3,450,000
Profit (EUR)	275,000	495,000	770,000	1,100,000	2,475,000

After prototype of RJ-45VR had been developed, the first offers will be expected to be received in the next three months and first quantity to be delivered by the end of first six months. This timetable is based on the existing experience in the dynamics of similar product producing and delivering.



PROJECT QUARTER	PLANNED MILESTONE(S) IN THIS QUARTER	DESCRIPTION OF TASKS RELATED TO MILESTONES
Q1	1. Task force setup 2. Product component design	1. Task force setup - Recruiting of the specialists for prototype design - Standardization of information exchange among team (regular team meetings, activity reports determination) and Experts' outputs 2. Preparation of the product component design - Defining of the experts' tasks for product component design preparation - Defining the action plan
Q2	2. Product component design	1. Preparation of product component design – technical documentation for production, Procedures, necessary working health protection, storage conditions, quality control Procedures setup
Q3	3. Machinery/tools for product components production obtaining	1. Machines/tools specification determination 2. Machines/tools ordering and obtain 3. Machines/tools installment and testing period of work performing
Q4	4. Laboratory for quality control installment	1. Laboratory specification determination 2. Laboratory obtaining 3. Laboratory setup and make it fully operational
Q5	5. Prototype production	1. Obtaining necessary raw materials and semi-products 2. Production of final products part based on the defined designs and procedures 3. Quality control of the product testing – in the laboratory
Q6	6. Final prototype production determination	1. Final product component design determination 2. Final product cost production value determination 3. Final production procedure setup 4. Fuality control procedure setup



SWOT ANALYSIS

1 STRENGTHS

- Experience in standard petrol guns production level
- Sufficient premises for production extension in terms of m2 space
- Highly trained and ex experienced employees?
- Stable financial reserves

3 OPPORTUNITIES

- Market development especially in EU
- Precise technological specification of product defined by EU and domestic regulations
- New markets preferably in Russia
- Geographical market expansions – Middle East and China

2 WEAKNESSES

- Insufficient resources for new product - petrol gun production installing (technical staff, new specialization requirements in terms of environment protection, laboratory setup)
- Lack of knowledge in new processes and system installment – lack of internal production flexibility
- Not sufficient agile marketing

4 THREATS

- Significant increase of electric cars usage
- Increasing of the interest rate of external co-financing sources
- Political barriers for export
- The change of EU and standards of foreign states in the sector

THANKS!

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