

Review of Serbian Technical Cooperation with CERN

November 29th 2024

- As it is known, Republic of Serbia is successor of former SFR Yugoslavia, which had been one of 12 founder states of CERN.
- Since 2012 Serbia has been an Associate member, and in 2019 Serbia became the full member of CERN

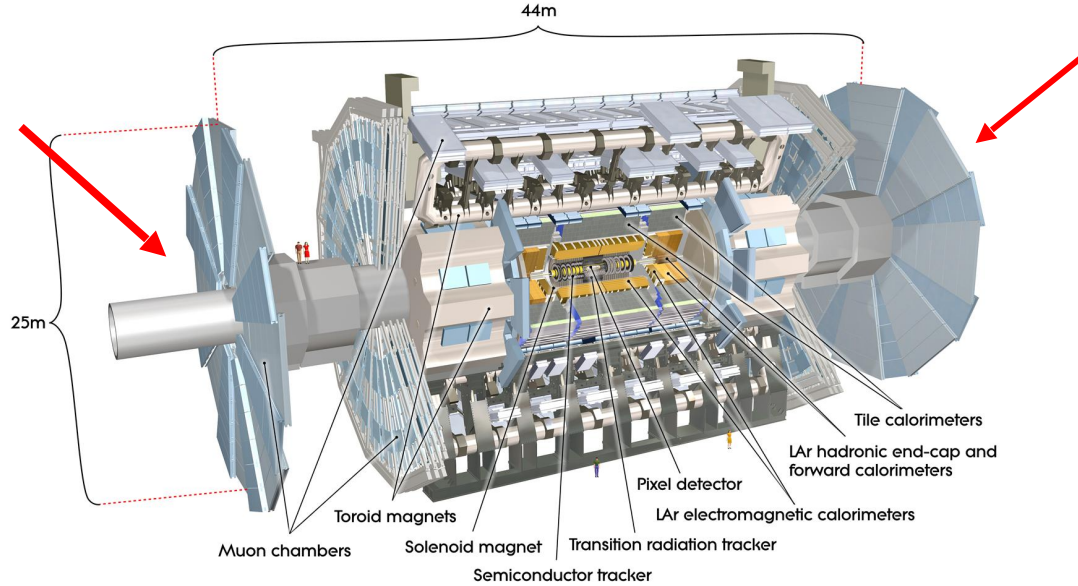


During the period when Serbia was joining CERN,
the preparation of LHC experiments was in progress.



75 hydraulic jacks
for the CMS magnet
were made in 2002
by “ZASTAVA Alati”
in Kragujevac and
delivered to CMS
in July 2003.

In 2002-2003 the 75 hydraulic jacks as connecting pieces for the CMS magnet have been manufactured by “ZASTAVA Alati”, now “UNIOR Components” from Kragujevac, Serbia.



Test assembly of JD disks at the “Lola factory” in October 2004

The two 120 tons shielding disks for forward part of the ATLAS detector, were manufactured in 2005 by the “LOLA Corporation” company from Belgrade, Serbia.



Jack HL-LHC

One more recent project was the production and delivery of special jacks for HL-LHC.

These special **jacks** for HL-LHC have been designed by CERN, while development of the technology for their production have been relied on the Serbian company **"UNIOR Components doo" from Kragujevac.**

After the thorough inspection and testing first at manufacturer's site and then at CERN, the 23 hydraulic pieces have been delivered to CERN this year.

Unfortunately, the contract for next 150 pieces has not been concluded between CERN and UNIOR Components.

Procurement Overview

for Serbia(Member State)

Key Figures for Serbia

No. of suppliers registered on eProcurement	22
No. of contracts active in 2023	4
No. of contracts awarded in 2023	1
No. of firms contacted for MS dispatched in 2023	17
No. of firms contacted for IT dispatched in 2023	0
No. of firms contacted for PE dispatched in 2023	3

Annual contributions and industrial returns for Serbia

Contributions (kCHF)

Year	Country Contribution	All Countries	%
2019	2 529	1 171 420	0.22
2020	2 752	1 196 893	0.23
2021	2 866	1 199 321	0.24
2022	3 003	1 206 284	0.25
2023	3 210	1 230 382	0.26
2024	3 445	1 266 086	0.27

Expenditures (All countries totals, kCHF)

Year	Supplies	Services
2019	261 375	167 528
2020	207 407	131 216
2021	206 717	133 358
2022	226 311	127 469
2023	236 125	134 661
2024*	297 377	134 535

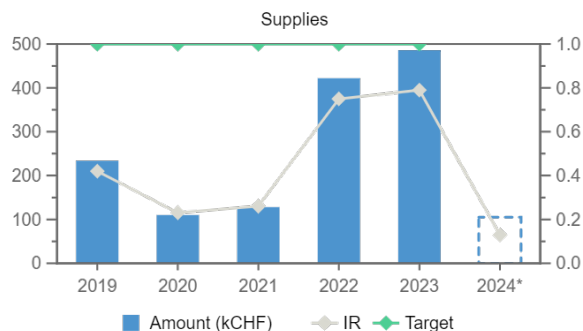
Expenditures (Serbia, kCHF)

Year	Supplies	Services
2019	234	–
2020	110	–
2021	128	–
2022	422	–
2023	486	–
2024*	105	–

Industrial Return

Year	Supplies		Services	
	Ratio	Target	Ratio	Target
2019	0.42	1	–	0.4
2020	0.23	1	–	0.4
2021	0.26	1	–	0.4
2022	0.75	1	–	0.4
2023	0.79	1	–	0.4
2024*	0.13	–	–	–

Annual Industrial Return



Modest industrial return for supplies has modest positive trend over the last three years.

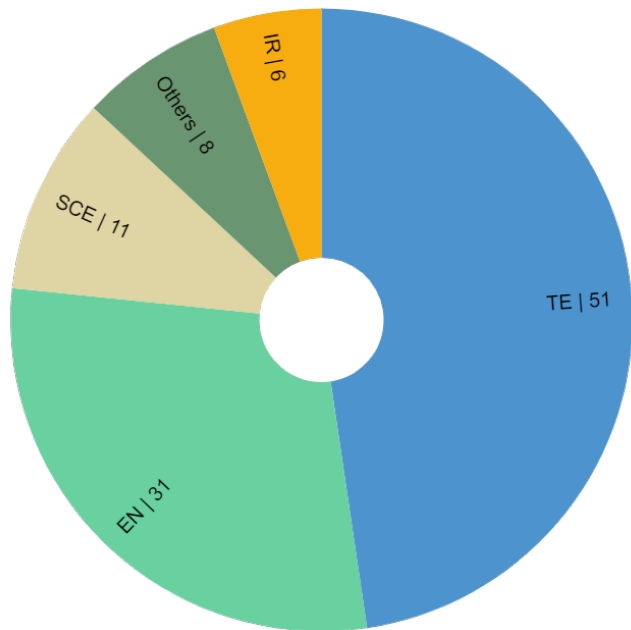
Significant room for improvement, both for supplies and services.

*Provisional figure based on commitments

* Numbers for 2024 include only the first 1/3 of the year.

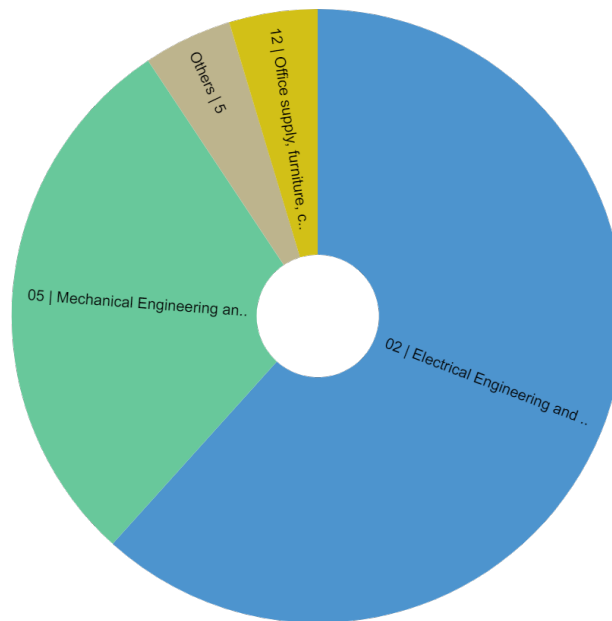
Expenditure by department and procurement codes for Serbia

Expenditure by Department (kCHF)



■ TE ■ EN ■ SCE ■ Others ■ IR

Expenditure by (Activity|Procurement) Code (kCHF)



■ 02 | Electrical Engineering and magnets
■ 05 | Mechanical Engineering and raw materials
■ Others
■ 12 | Office supply, furniture, communication and training

Top Suppliers in Serbia

By Country of Supplier

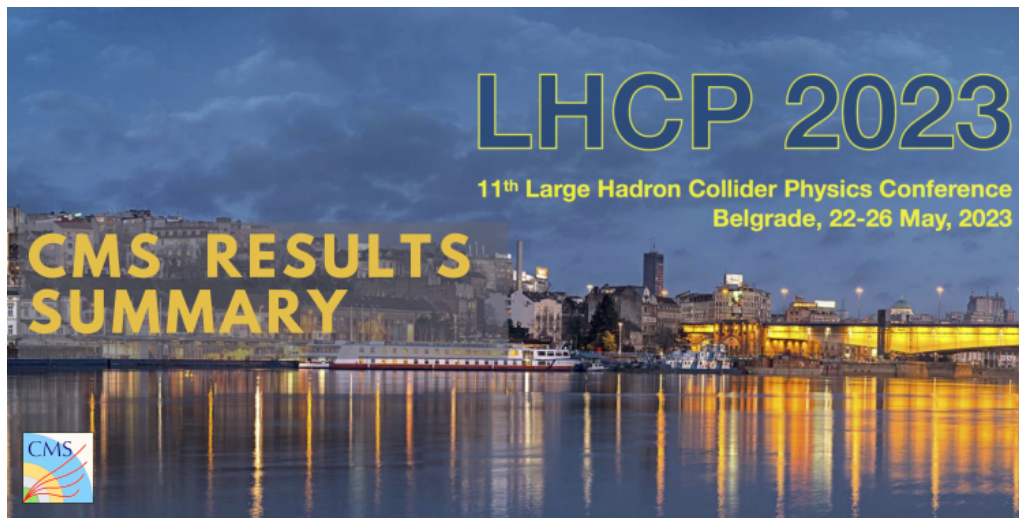
Supplier Name	Town	No. Orders	CERN Budget (CHF)	Teams Budget (CHF)
ATB SEVER DOO	Subotica	1	50 608	–
UNIPLAST DOO	Vrnjacka Banja	4	24 213	–
GM CONVERTING	Gornji Milanovac	6	20 767	–
NEW COMPANY DOO, OGRANAK IN HOTEL	Belgrade	1	–	–
SERVOTEH DOO	Belgrade	1	–	–
COMTRADE SYSTEM INTEGRATION DOO BEI	Belgrade	4	–	–
SLOBODAN BUBNJEVIC	Zemun	1	5 000	–
VELS ELEKTRO	Veternik	2	–	–
UNIVERSITY OF BELGRADE FACULTY OF PHY	Belgrade	1	1 948	–
KLUB KNJIZEVNIKA DOO	Belgrade	1	–	–

By Country of Origin

Supplier Name	Supplier Cou	No. Orders	% RS	CERN (CHF)	Teams (CHF)
ATB SEVER DOO	RS	1	100	50 608	–
UNIPLAST DOO	RS	4	100	24 213	–
NEW COMPANY DOO, OGRANAK IN HOTEL	RS	1	100	–	–
ZUMTOBEL LICHT AG	CH	7	34	11 117	–
SERVOTEH DOO	RS	1	100	–	–
GM CONVERTING	RS	3	29	6 078	–
COMTRADE SYSTEM INTEGRATION DOO BEI RS	RS	4	100	–	–
SLOBODAN BUBNJEVIC	RS	1	100	5 000	–
TECHNIX	FR	1	6	2 422	–
VELS ELEKTRO	RS	2	100	–	–

List of contract/orders with the highest turnover in 2024 for Serbia

Contract/Order	Description	Supplier	Amount (CHF)
B1704	LHC CRITICAL ELEC MOTOR SPARE	ATB SEVER DOO	50 608
CA1102346	J3090554 WORKSTATION QUADRUPOLE SUPPORTS	UNIPLAST DOO	19 963
CA1069127	J3086988 ATLAS BARREL BRACKETS	GM CONVERTING	6 275
KE3788	EPCPN AGREEMENT	SLOBODAN BUBNJEVIC	5 000
CA1214799	J3093849 MANUAL BENDING TOOL SPS COIL MB	UNIPLAST DOO	4 250
CA1213354	TR STOCK (ZUMTOBEL) BAT 54 80	ZUMTOBEL LICHT AG	2 649
CA1205347	MEGADISCAP: CHARGEURS SPARES BOOSTER+AD	TECHNIX	2 422
DT2100534	30 DAYS	ZUMTOBEL LICHT AG	2 382
DT2100639	30 DAYS	ZUMTOBEL LICHT AG	2 024
DT2100159	30 DAYS	ZUMTOBEL LICHT AG	1 974



LHCP (Large Hadron Collider Physics Conference 2023),

one of the most important conferences in High Energy Physics was held in Belgrade in the last week of May 2023. More than 400 physicists from around the world attended it in order to discuss the latest results from LHC experiments.

Besides physics, the conference also included a series of additional programs include a scientific-diplomatic forum, an innovation panel, visits to companies cooperating with CERN, and other related activities.

Some matters and issues about our technical and economical cooperation with CERN

One of the significant matters that has been going on for years and still in progress is the transformation of the Serbian economy. Many industrial companies, especially larger ones, underwent reconstruction and renovation from the former Yugoslavia and later Serbia. Some of them have been significantly transformed, while some even did not survive like: LOLA Corporation, Minel, DMB, Zmaj, Electronic Industry Nis, Energoprojekt, etc.

Smaller companies and those left from larger companies mentioned above, are, more or less, still capable to produce some, at first hand, machining commodities that may be interesting and useful for CERN. Though there is some deficiency of motivation of many companies for the cooperation with CERN, we will have to work on this and try to overcome these obstacles.