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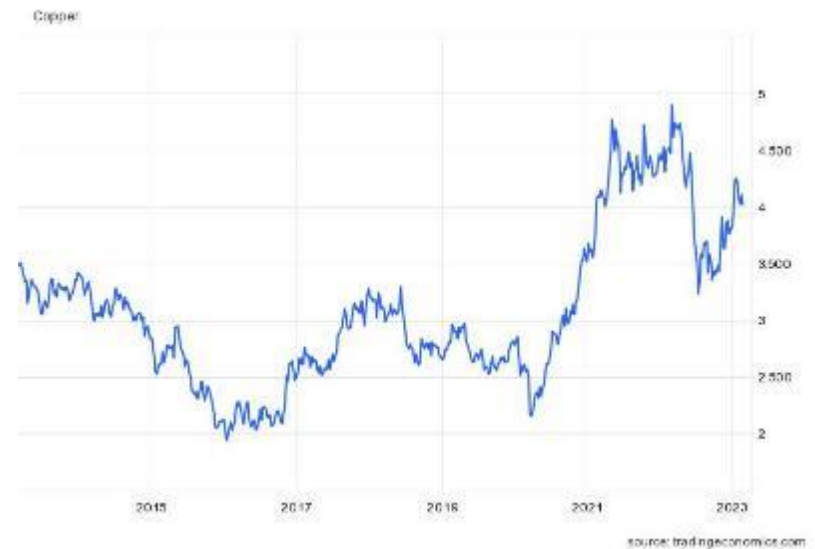
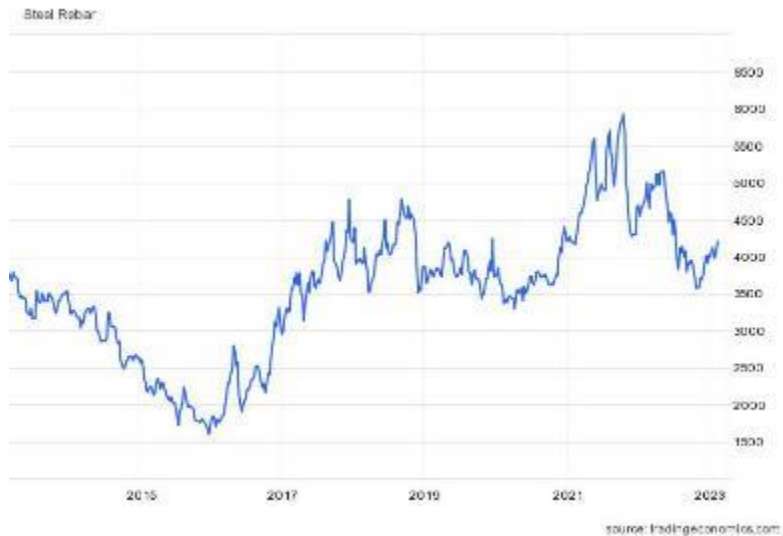
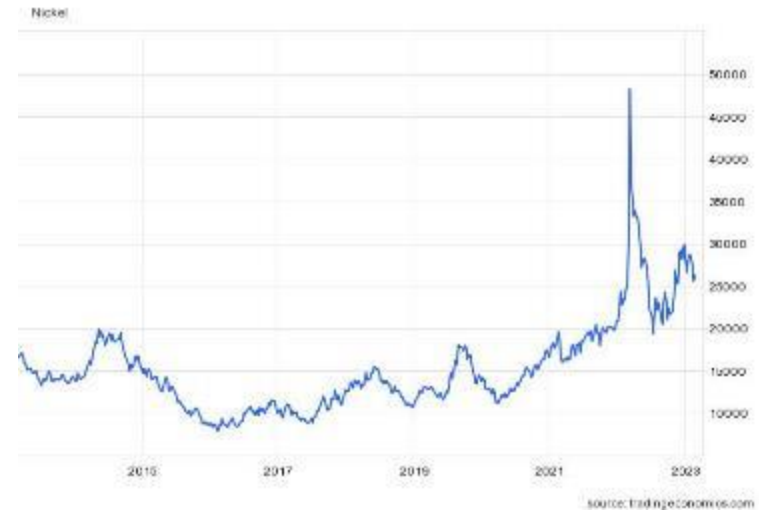
Report on Procurement during the period 1 January to 31 December 2022

CERN/FC/6658/RA

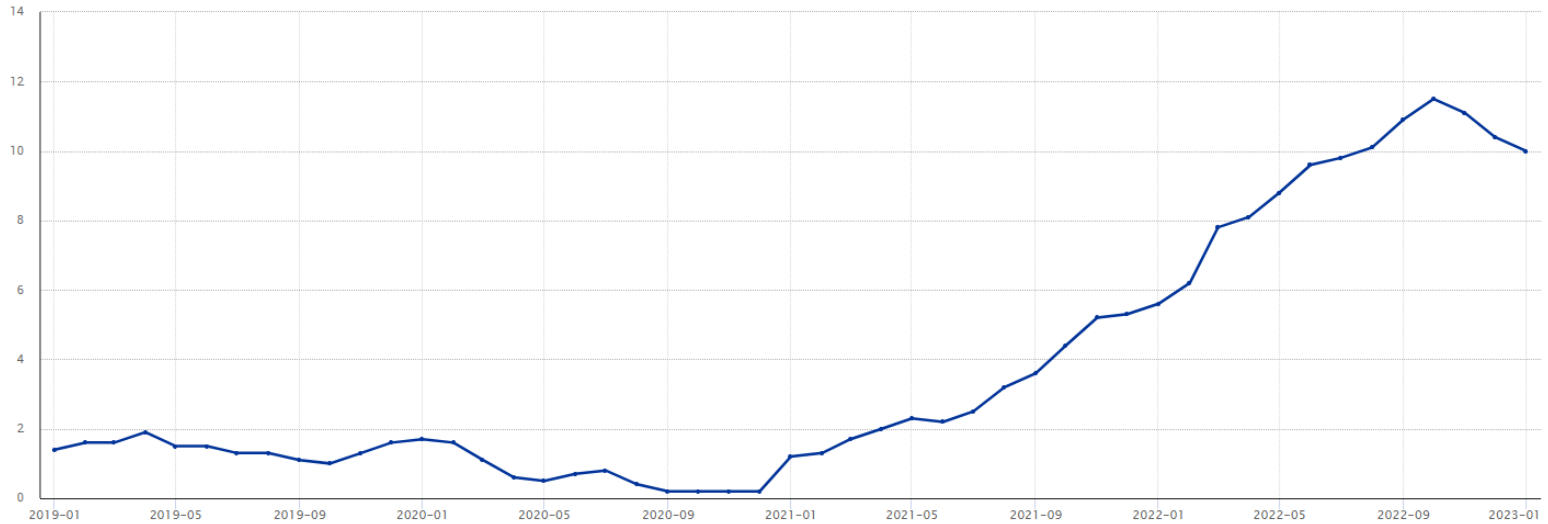
23rd ILO Forum Meeting, 21 March 2023

2022 – A year in review

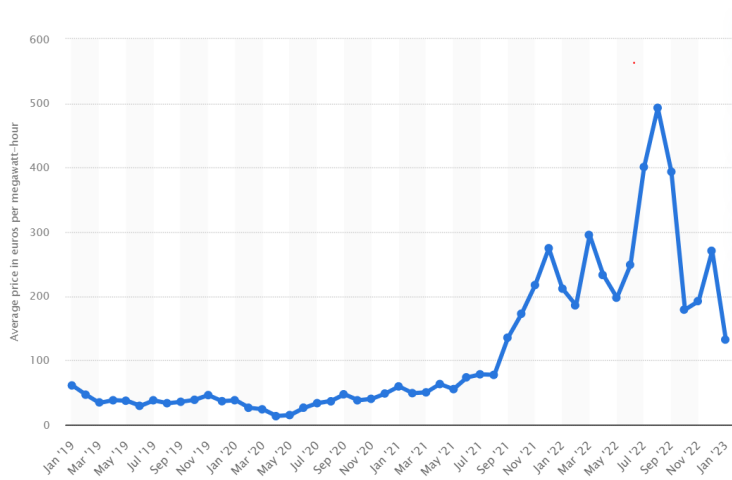
Extreme volatility of raw material prices due to covid-19 pandemic and war in Ukraine, some examples: Nickel, steel, copper over 10 years (USD)



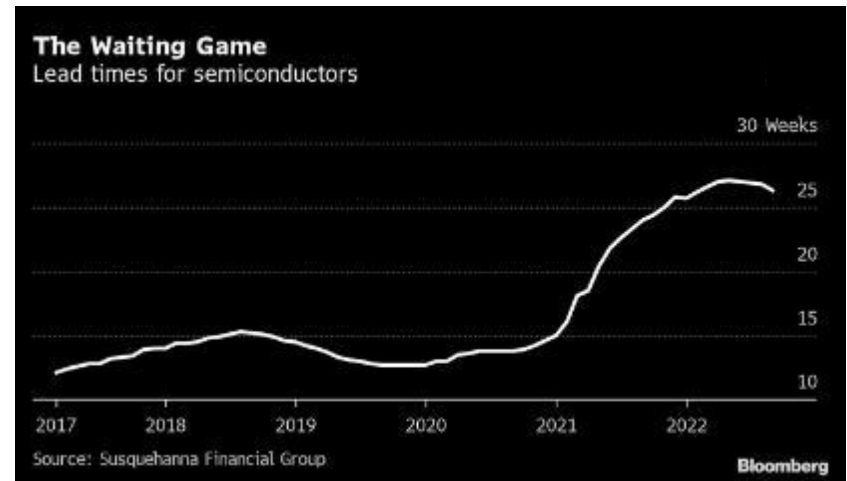
2022 – A year in review



Above: Harmonised index of consumer prices, annual rate of change, EU (27 countries), source: Eurostat



Above: French wholesale electricity costs, source: Statista



Source: Susquehanna Financial Group

Bloomberg

2022 in review – Electricity

- Strategies put in place to limit CERN's exposure to volatile prices
- Increase in consumption managed for a lower overall price due to a higher proportion of electricity provided at the ARENH tariff, energy-saving measures implemented at CERN and advancing YETS by two weeks
- CERN certified as ISO50001 (Energy Management) compliant
- Nevertheless, major uncertainty around future market conditions

2022 in review – Standardisation

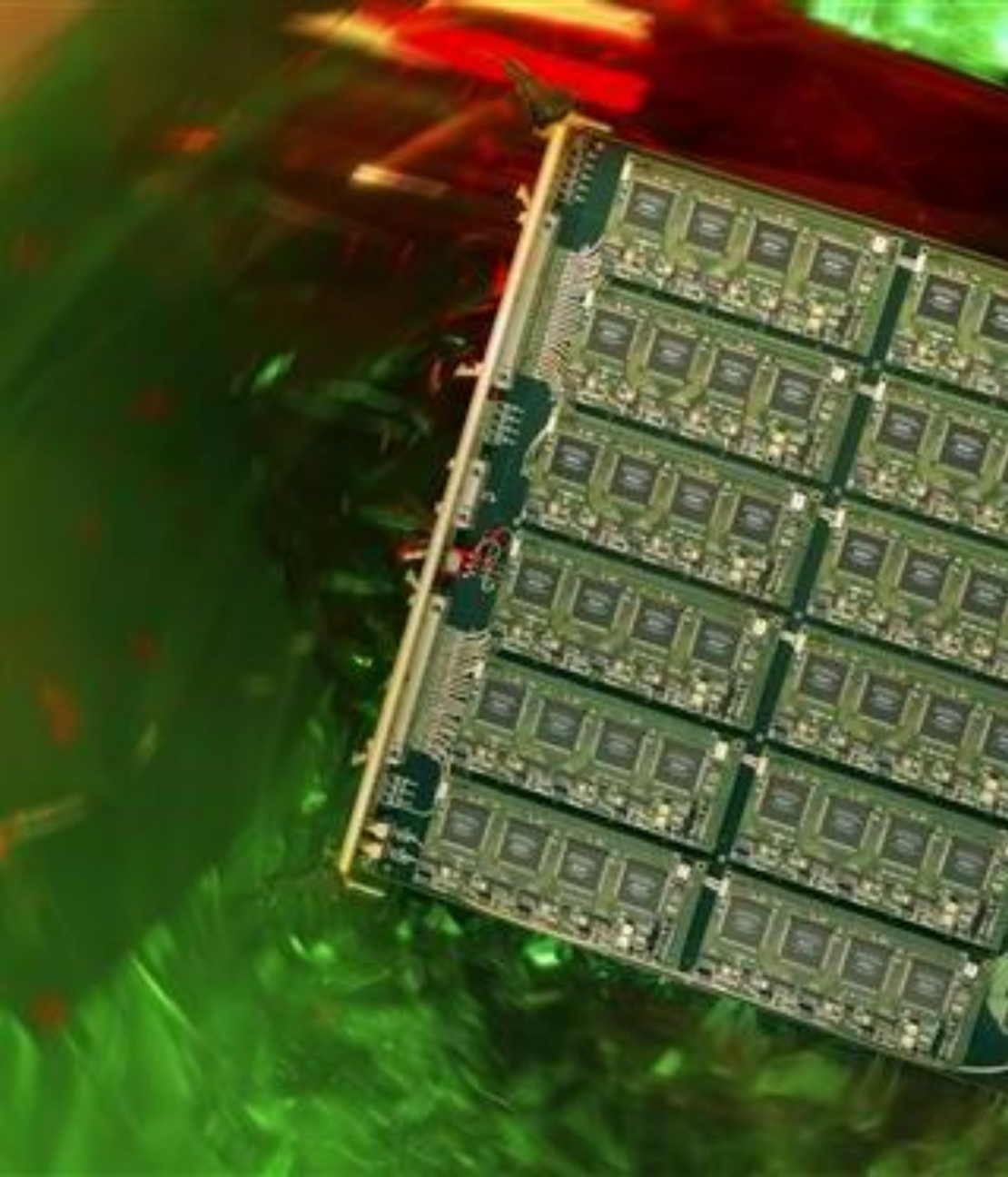
- **New punchout catalogues to manage tail spend:**
 - Electronic components : Digi-Key and Mouser Electronics
 - Small industrial items (MS/IT)
- **New standardization committees:**
 - Raw Materials
 - Cables and Connectors
 - Vacuum



2022 in review – Civil Engineering

- Successful completion of major HL-LHC civil engineering works at Point 1 and Point 5
- Significant progress on the construction of the Science Gateway project despite challenging conditions
- Major construction works for the new Prévessin Computer Centre successfully completed
- Innovative architectural tender process launched for the design of new Building 777 incorporating key sustainability considerations





2022 in review – IC shortage

- Extensive negotiation needed to retain access to foundries (TSMC/GF) for custom ASIC fabrication
- Extensive negotiations limiting price increases announced by foundries and major IC vendors
- Internal coordination and communication in response to 50+ week lead times

2022 in review – Limited Tendering

- 16 DO/ITs following a limited tendering process during 2022
- Including two ITs for the supply of CPU servers and disk storage, leading to 6 contracts
- And one IT for the supply of electrical cabinets



2022 in review – Industrial Services

- 10 new temporary labour contracts
- Technical Support contract for SY partially replacing FSU contract started in July 2022
- Preparation for retendering of other FSU contracts
- Extensive negotiation to limit CERN's contribution to cost increases due to inflation in all service contracts



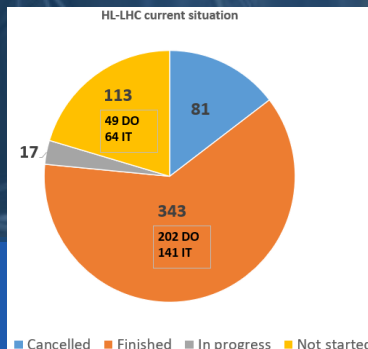


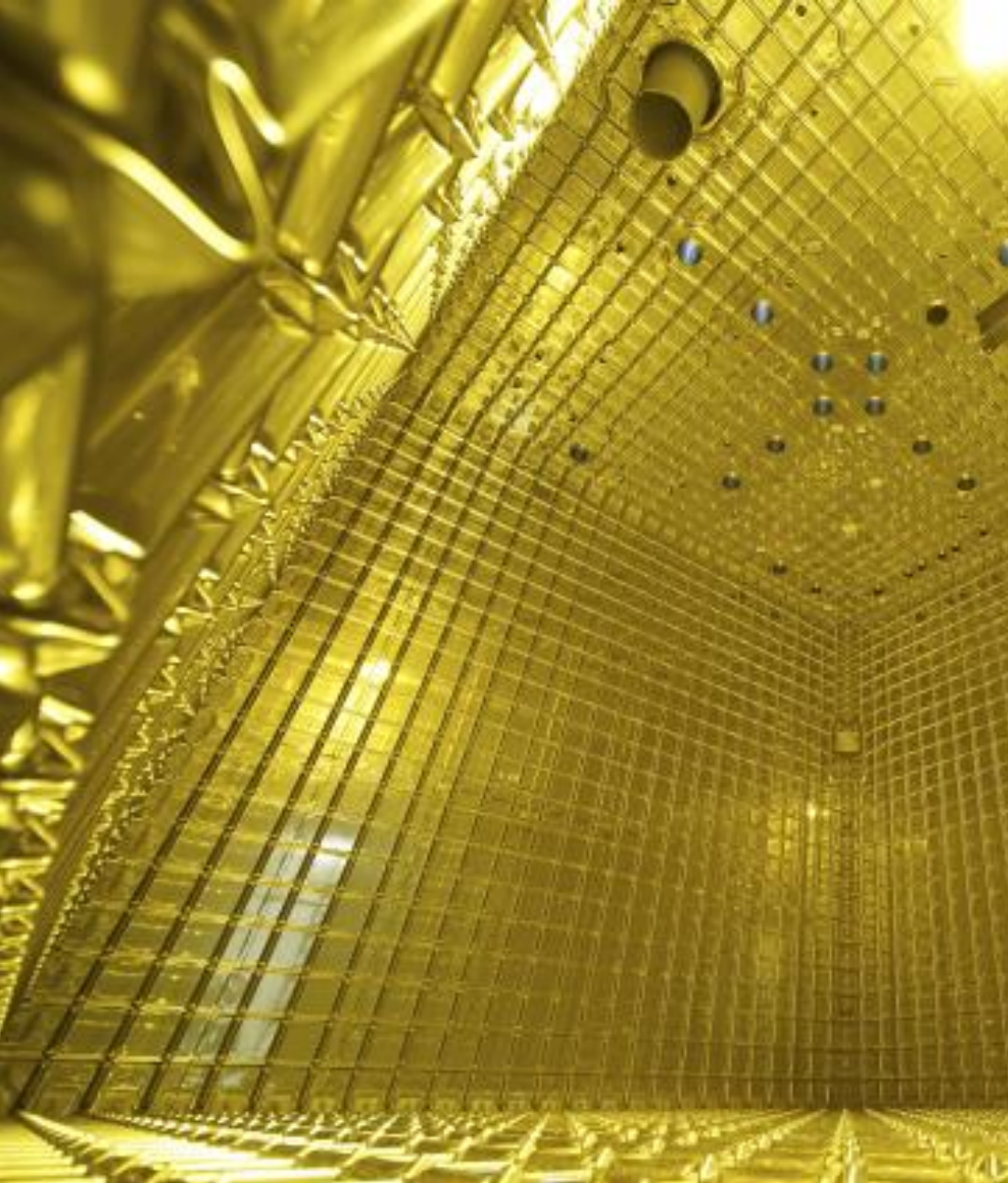
2022 in review – Industry Events

- **Belgium@CERN**
- **Norway@CERN**
- **Portugal@CERN**
- **Baltics@CERN**
- **Greece@CERN**
- **UK@CERN**
- **BSBF 2022**
- **Preparation for transition to thematic events**
- **Thematic day on cabling, electrical cabinets, switchboards, power converters and switchgears**

2022 in review – Hi-Lumi

- Extensive negotiation of price revision formulae to adapt to market volatility and preserve CERN's best interest
- Award of two Contracts for cryogenic distribution at LHC1 and LHC5
- Award of two Contracts for He refrigerators at LHC1 and LHC5
- 34 % of ITs still to come
- 20 % of DOs still to come





2022 in review / Dune

- Award of a contract for the supply of components for two tertiary membranes
- Award of a contract for the supply of beams for the welded structures
- Award of a contract for welded steel structure for the two cryostats

2022 in review / Darkside

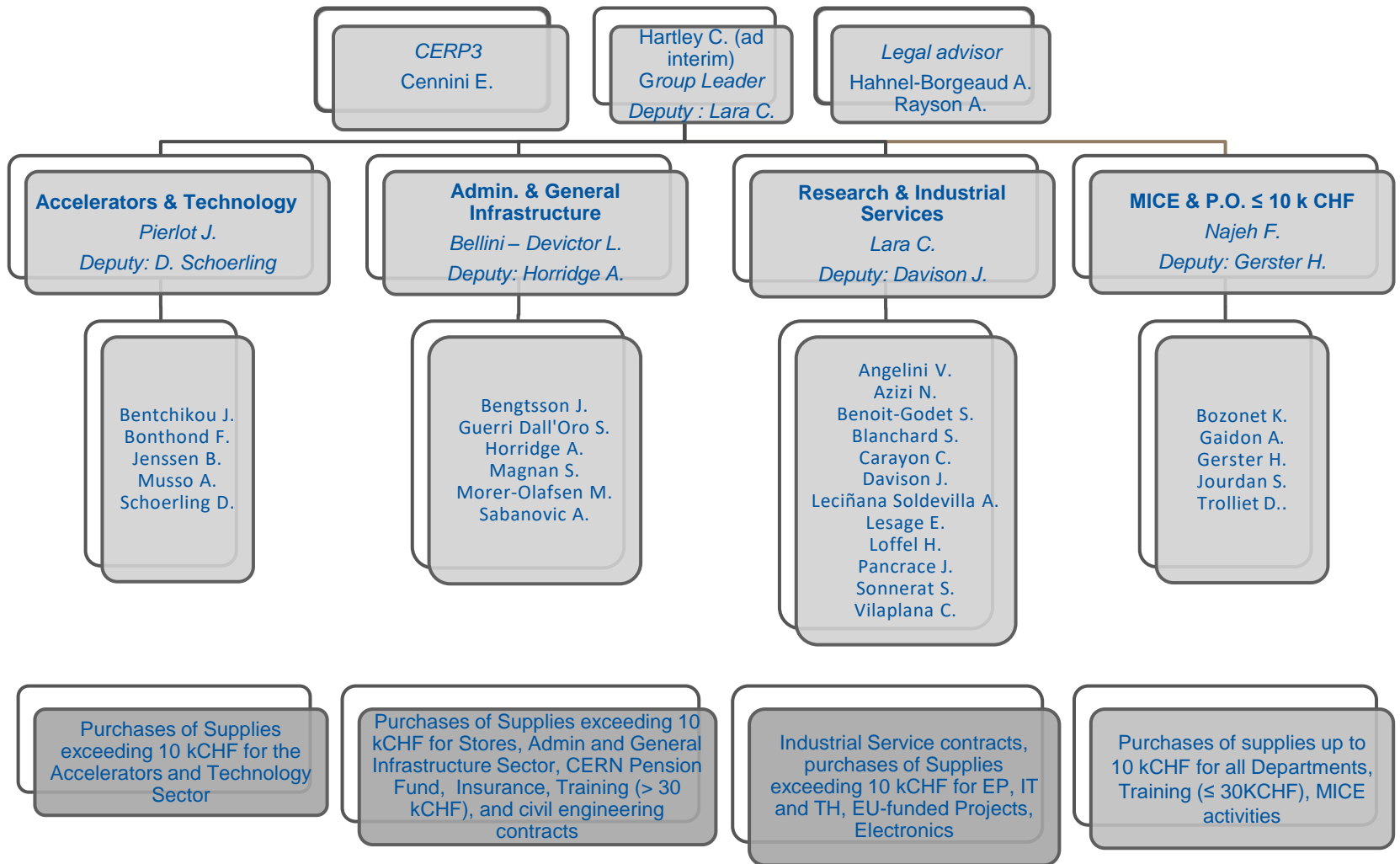
- Award of a contract for the detailed engineering for the cold structure of the cryostat



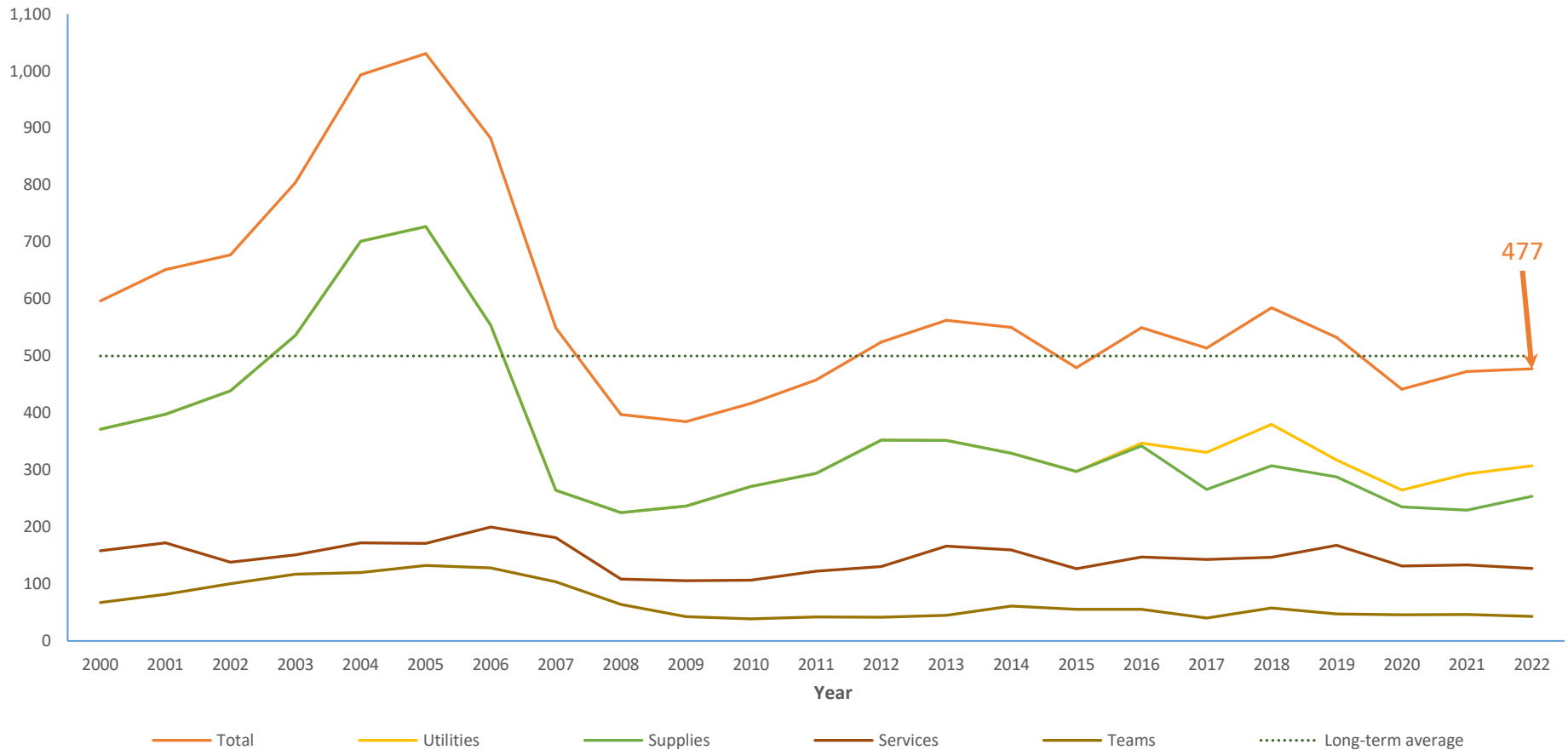
Other achievements

- Training modules offered by the Procurement Service ranked 1st of all courses through CERN's LMS (average 9.1/10)
- Environmental friendly procurement policy draft finalized, for publication in 2023
- General Conditions of CERN Contracts updated
- Working groups established to study possible improvements in CERN's procurement rules, tools and procedures

IPT-PI, Organization

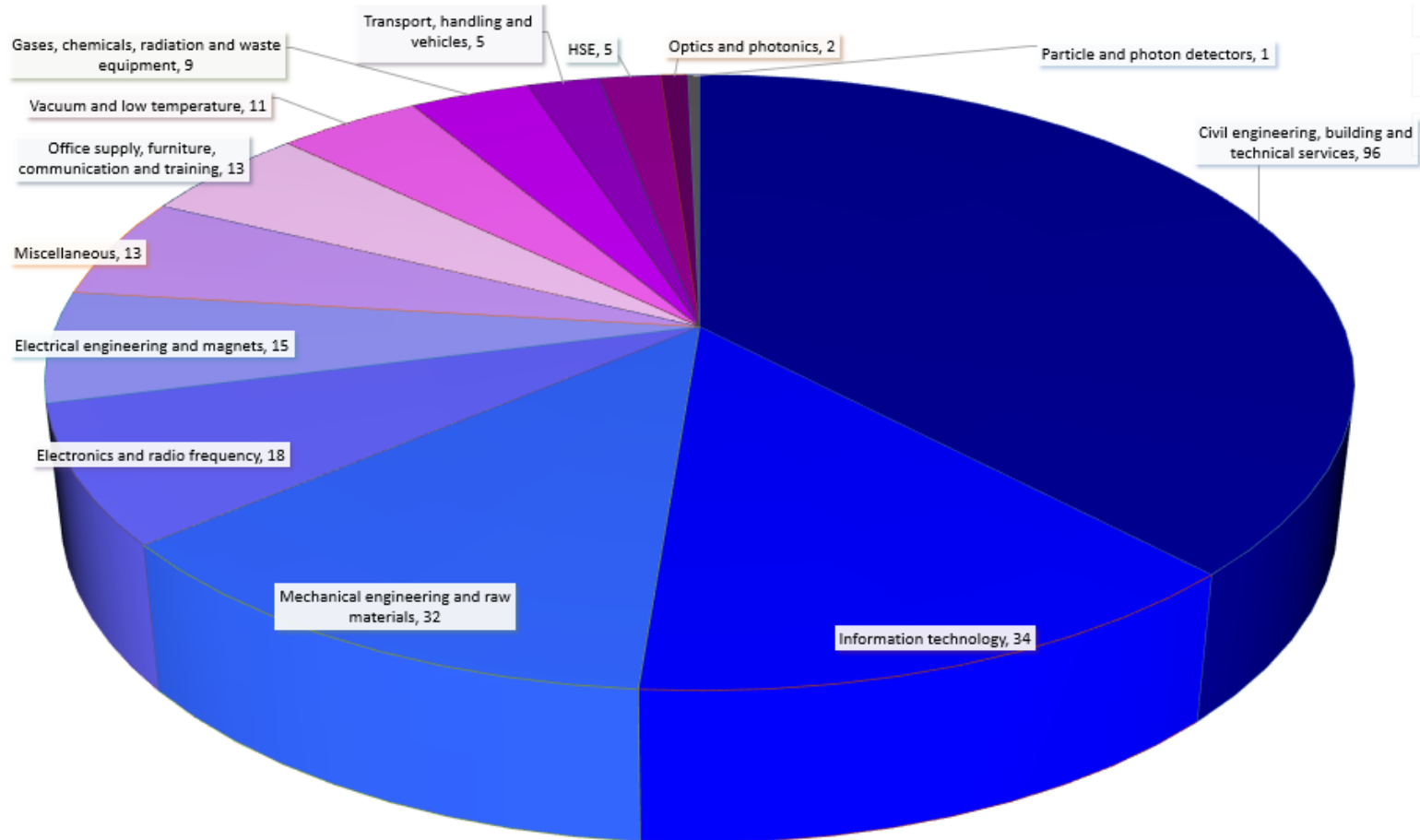


Procurement Expenditure



Supplies

(254 MCHF in 2022*)

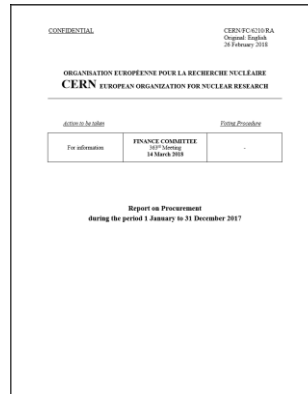


*Excluding visiting research teams and collaborations

Procurement statistics

A reminder: the report in two documents:

1) Paper Format



2) Interactive Procurement report

All information can be found at:

<https://cern.ch/procurement-report>

Country	Payments per procurement code (rounded to CHF)													Totals					
Name	1	2	3	4	5	6	7	8	9	10	11	12	13	Total	Return 2021/2021	Return coefficient 2021/2021			
Austria	4 213	80	37	304	596	307	-	-	-	-	-	-	-	6	74	132	5 749	1.29	1.12
Belgium	924	121	409	68	498	22	-	10	59	19	22	455	16	2 624	0.47	0.54			
Bulgaria	42	2	8	-	12	-	-	-	-	-	-	-	-	13	-	77	0.12	1.06	
Switzerland	21 193	955	1 469	3 528	2 939	1 911	72	145	960	1 409	2 153	3 275	4 634	44 643	5.63	4.6			
Cyprus	-	-	-	-	-	6	-	-	-	-	-	-	-	1	7	0.04	0.42		
Czech Republic	6	123	256	508	39	171	6	-	3	1	345	234	14	1 708	0.81	1.21			
Germany	16 377	1 711	3 453	7 191	4 453	1 708	129	452	1 079	1 505	773	892	2 937	43 652	1.01	0.91			
Denmark	5	36	49	13	505	20	-	19	36	-	15	33	13	744	0.21	0.42			
Estonia	-	-	23	16	1	-	-	-	-	-	-	-	-	73	0.44	-			
Spain	3 411	886	204	2 458	356	167	11	-	2	94	339	351	865	9 244	0.61	0.93			
Finland	10	90	49	23	433	5	149	-	-	229	4	29	93	1 133	0.41	0.69			
France	13 750	1 906	1 817	2 743	2 064	807	28	147	2 594	1 357	804	1 802	2 248	54 109	1.32	1.14			
United Kingdom	318	288	1 301	4 195	1 956	761	2	92	88	116	379	1 431	143	11 070	0.37	0.4			
Greece	96	139	142	-	348	-	-	-	-	3	77	90	13	908	0.43	0.77			
Croatia	-	-	-	2	68	-	-	-	-	-	24	-	3	96	0.56	0.4			
Hungary	9	40	319	748	12	4	-	-	-	-	11	-	1	1 143	0.83	3.02			
Israel	-	44	56	285	41	2	164	3	-	-	-	5	2	603	0.16	0.23			
India	30	10	28	42	457	26	-	-	2	27	1	7	22	651	0.23	0.15			
Italy	16 728	5 740	1 434	28	1 331	738	7	-	249	68	2 101	409	675	29 507	1.4	1.18			
Lithuania	-	12	3	-	48	-	-	22	-	-	-	-	16	3	105	0.41	0.92		
Latvia	-	-	-	-	5	-	-	-	-	-	6	-	-	21	0.22	-			
Netherlands	62	335	268	2 021	649	938	10	19	9	55	153	1 362	166	6 049	0.64	1.04			
Norway	227	6	2	1 374	435	15	-	-	-	-	-	3	228	156	2 040	0.61	0.28		
Pakistan	-	-	-	-	1	-	-	-	-	-	8	-	-	48	0.17	0.84			
Poland	6	250	187	2 900	75	479	-	15	73	29	1 498	88	392	5 991	1.06	0.92			
Portugal	969	17	46	1	90	1	-	-	-	1	46	21	255	1 448	0.45	0.82			
Romania	42	122	60	-	119	23	-	15	-	-	11	1	-	10	423	0.18	1.06		
Serbia	41	63	-	-	17	-	-	-	-	-	-	-	5	1	128	0.26	0.54		
Sweden	164	268	175	233	337	50	-	37	2	-3	1	44	8	1 305	0.25	0.62			
Slovenia	1	-	6	8	132	-	-	-	6	-	-	1	8	162	0.67	0.53			
Slovakia	460	-	3	-	242	-	-	9	1	8	-	3	1	726	0.7	1.35			
Turkey	32	240	5	-	187	8	-	-	-	1	279	-	11	763	0.83	0.98			
Ukraine	-	-	-	-	39	-	-	-	-	-	16	-	-	55	0.32	0.57			
Sub-Total Member States	79 137	13 485	13 811	29 101	18 494	8 163	577	1 006	5 162	4 966	9 024	10 901	12 890	206 717					
Supplies Percentages	32.28%	6.52%	6.62%	14.02%	8.95%	3.95%	0.23%	0.49%	2.5%	2.4%	4.37%	5.27%	6.24%						

A reminder: Procurement Rules

- three categories:
 - Supplies;
 - Services; and
 - Utilities
- Industrial return calculation excluding:
 - Utilities;
 - Single orders < 1kCHF;
 - Visiting teams and collaboration accounts; and
 - Non member state origins.
- Target:
 - Supplies = 1.0;
 - Services = 0.4

Industrial return,
based on
2019-2022

Supplies
Target = 1.0

Services
Target = 0.4

	SUPPLIES			INDUSTRIAL SERVICES	
	Well balanced	Poorly balanced	Very poorly balanced	Well balanced	Poorly balanced
AUSTRIA	1.31				0.10
BELGIUM		0.51			0.05
BULGARIA			0.25		
SWITZERLAND	5.06			9.89	
CYPRUS ²		0.44			
CZECH REPUBLIC		0.82			
GERMANY		0.91			0.12
DENMARK			0.36	2.96	
ESTONIA	1.02				
SPAIN		0.71		1.33	
FINLAND		0.53			
FRANCE	1.25			2.52	
UNITED KINGDOM		0.41		0.44	
GREECE		0.63			0.30
CROATIA		0.58		0.53	
HUNGARY	1.41				
ISRAEL			0.21		
INDIA			0.39	-	
ITALY	1.31				0.21
LITHUANIA	1.09				
LATVIA		0.68			
NETHERLANDS		0.78			0.02
NORWAY		0.41			
PAKISTAN		0.56			
POLAND		0.74			0.02
PORTUGAL		0.78			
ROMANIA		0.74			
SERBIA		0.43			
SWEDEN		0.61			
SLOVENIA		0.83			
SLOVAKIA		0.86		0.63	
TÜRKIYE	1.17				
UKRAINE			0.29		





















Industrial Return to Member States, supplies 1 March 2023 – 28 February 2024

Well Balanced






 Austria
 Estonia*
 France
 Hungary
 Italy
 Lithuania*
 Switzerland
 Turkey*

Increased
from 7 to 8

Poorly Balanced

 Belgium
 Croatia*
 Cyprus*
 Czech Republic
 Finland
 Germany
 Greece
 Latvia*
 Netherlands
 Norway
 Pakistan*
 Poland
 Portugal
 Romania
 Serbia
 Slovak Republic
 Slovenia*
 Spain
 Sweden
 United Kingdom

Very Poorly Balanced

 Bulgaria
 Denmark
 India*
 Israel
 Ukraine*

Decreased from 9 to 5

IN from 0.17 to 0.39 and
annual return 0.91 !!

EE from VPB to WB !!

Two largest VPBMS by
contribution moved to
PB

Assessment of the situation

- Improvement measures implemented by IPT-PI, in particular the increased use of Limited Tendering procedures, are helping
- However, there is more work to be done and measures are needed to avoid ‘backsliding’ of countries with a ‘poor’ (but not yet ‘very poor’) industrial return
- Appetite for increased use of Best Value For Money for Supply contracts – reduced by need to come to FC in advance
- Difficulties when Associate Member States reach their ceiling (combination of HR and procurement = contribution)
- **KPI of 3 VPBMS by 2025** is achievable (assuming no new AMS in KPI) – but special measures may be needed
- Careful consideration being given to optimise service (team structure, thresholds, process optimisation)

Thank you for your attention!