

ASD-EUROSPACE

The Space group in ASD

facts & figures 2024

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markets

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Employment by segment

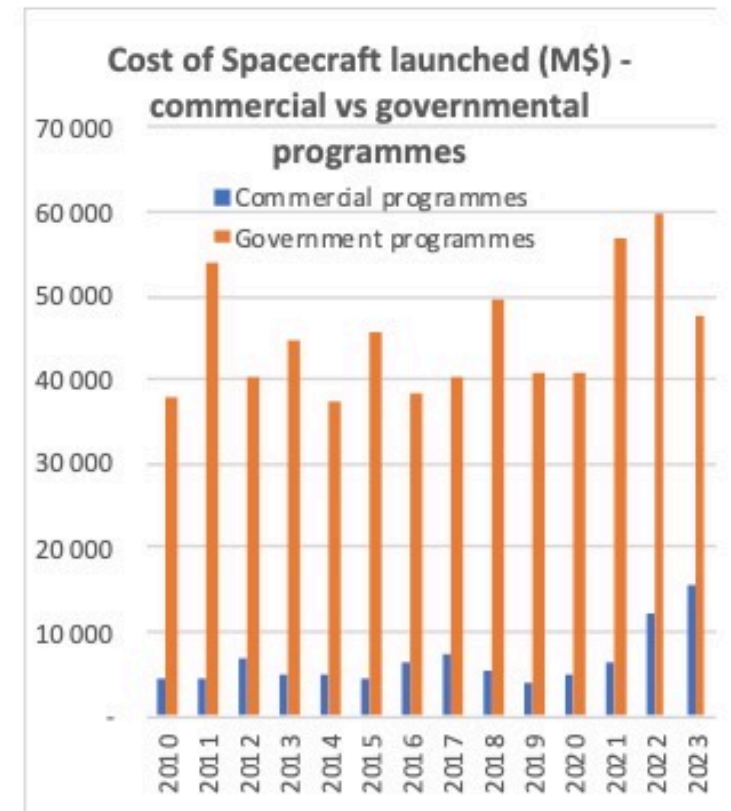
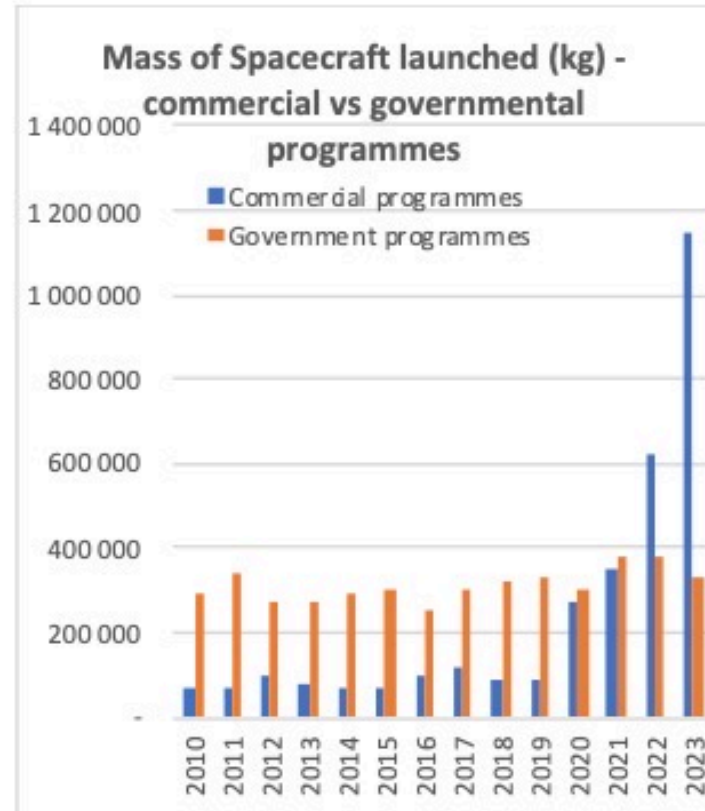
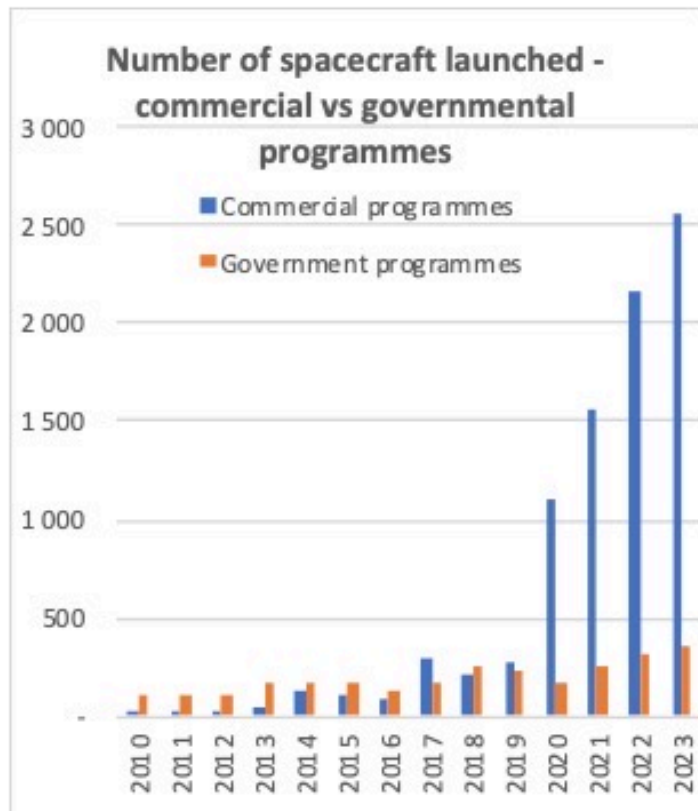
Sales by segment



Global context

Macro trends in space infrastructure markets

Different market metrics

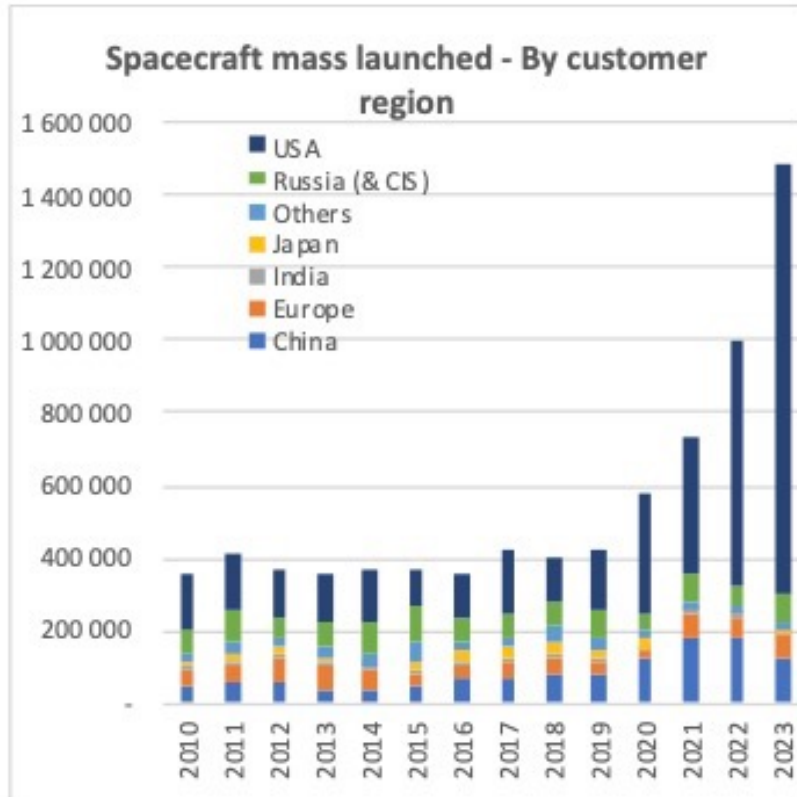


Satellite count is not an efficient market metric

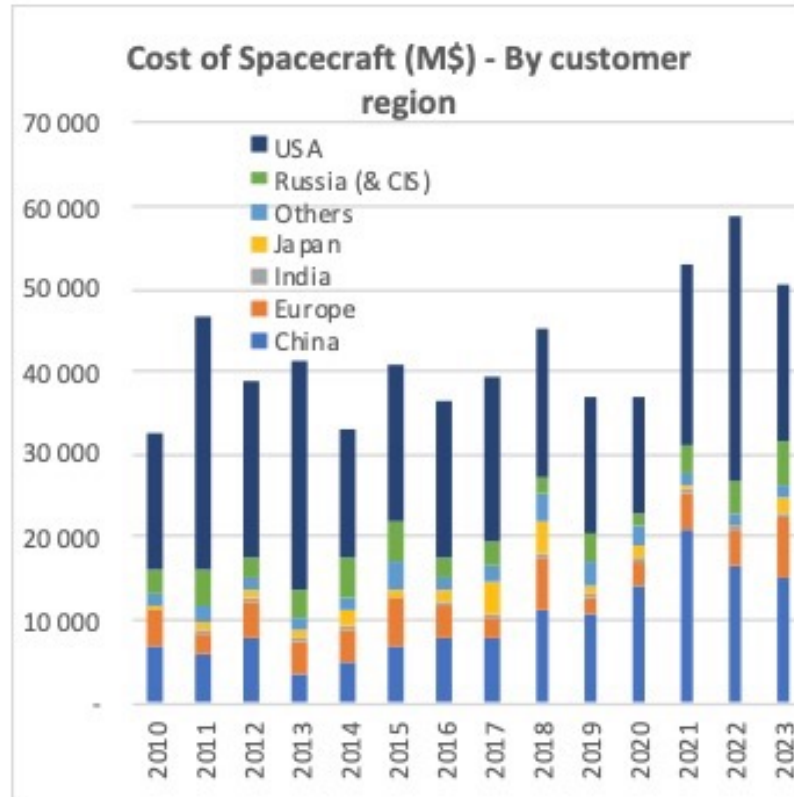
Measuring mass at launch is better, but does not translate into market opportunity

Government programmes: larger business opportunities than commercial ones, in absolute terms and in proportion to mass

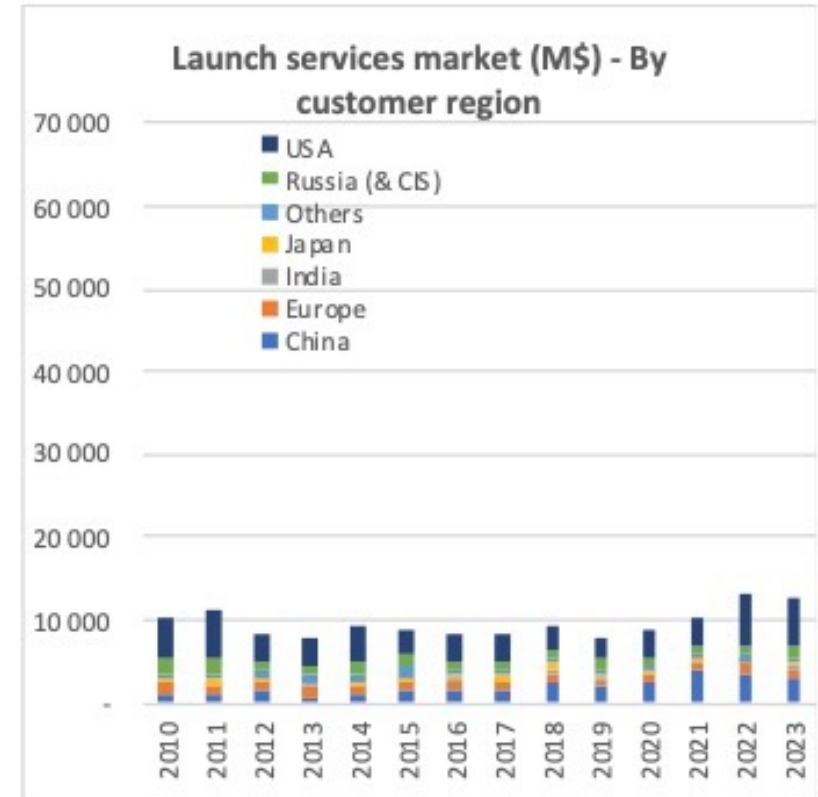
Macro assessment: mass and markets



Global launch activity in growth
1500t launched in 2023
95% of the growth: Starlink

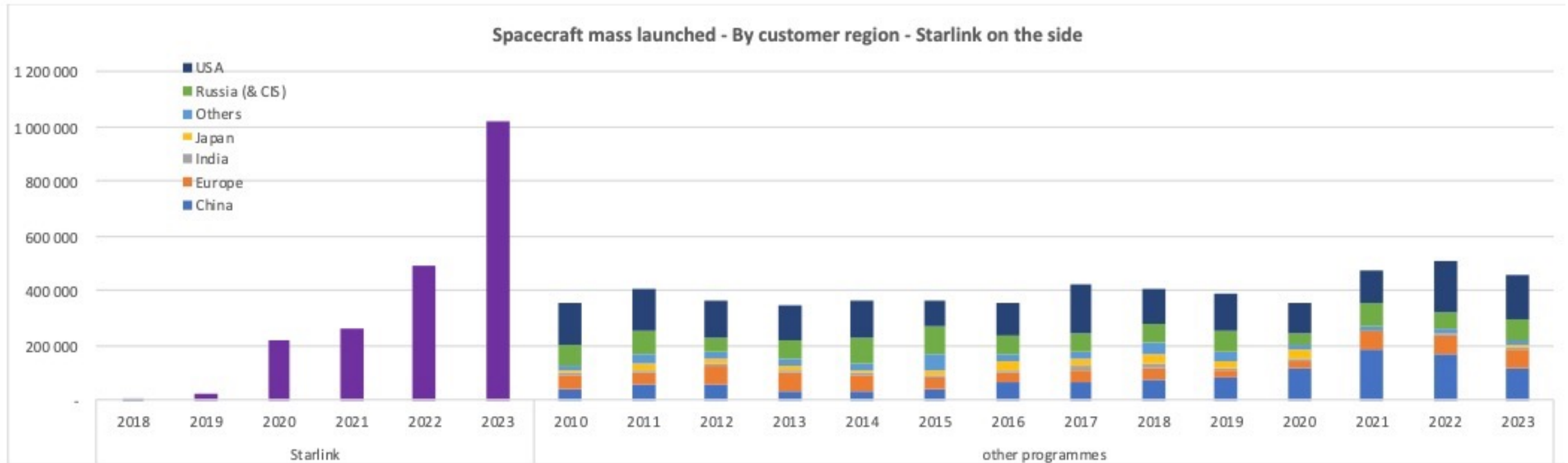


Global spacecraft market value 30-60B\$
USA and China: 70% of total
Most of it is government funded



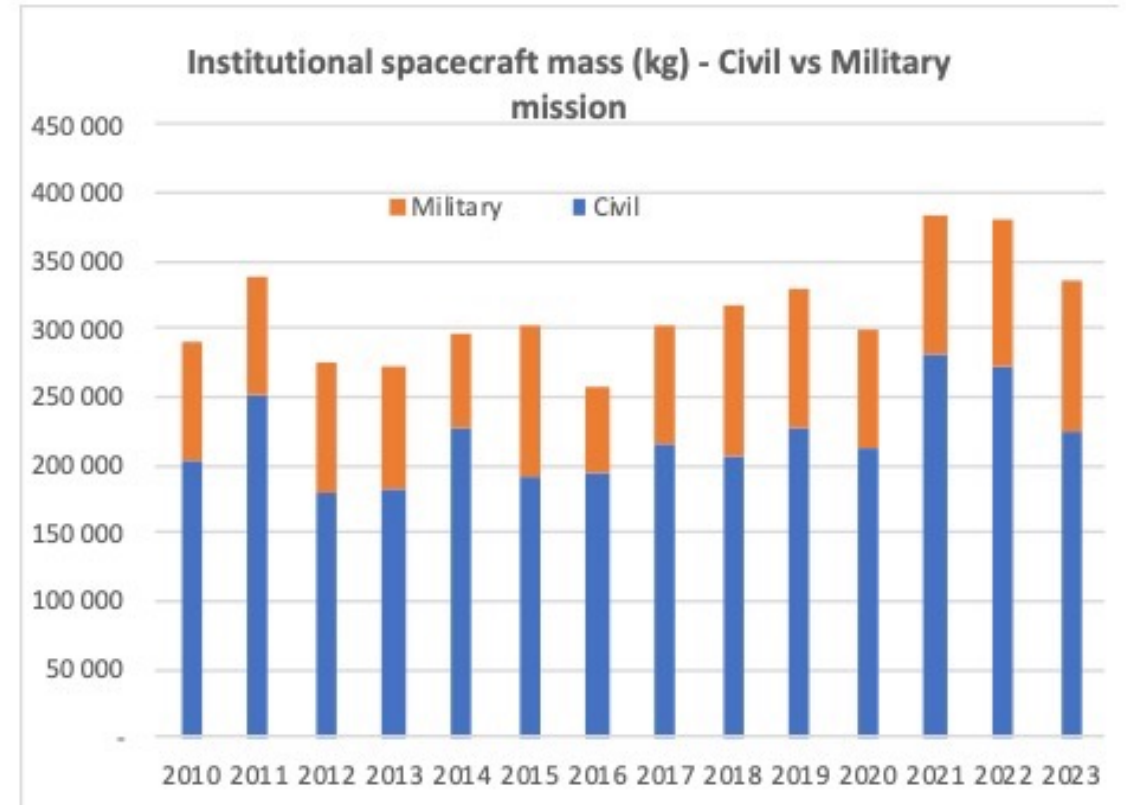
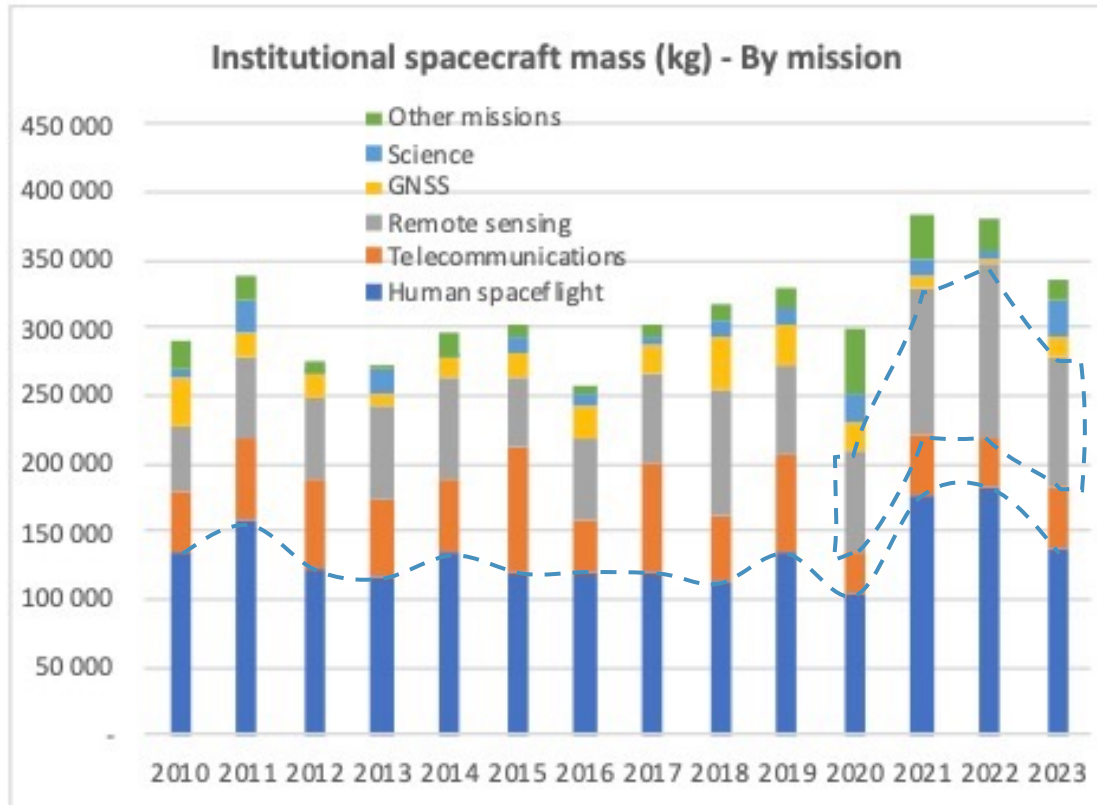
Global launch market value 9-13B\$
USA and China: 70% of total

Key macro trends



Disregarding Starlink, there was only moderate growth in space activity at global level

Key trends in institutional programmes

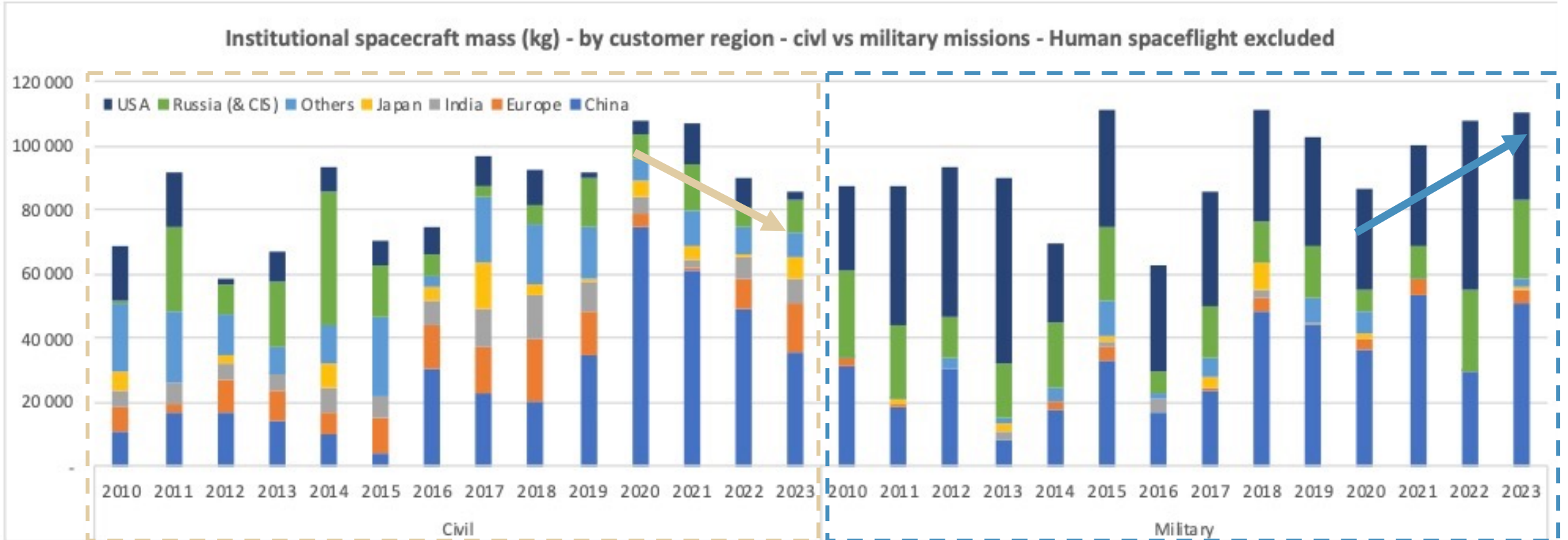


Recent growth supported by Human spaceflight programmes (CSS, Artemis) and Remote Sensing

Civil Programmes: 70% of mass launched But 60% of civil programmes mass is Human spaceflight programmes

Key trends in institutional programmes

civil vs military programmes

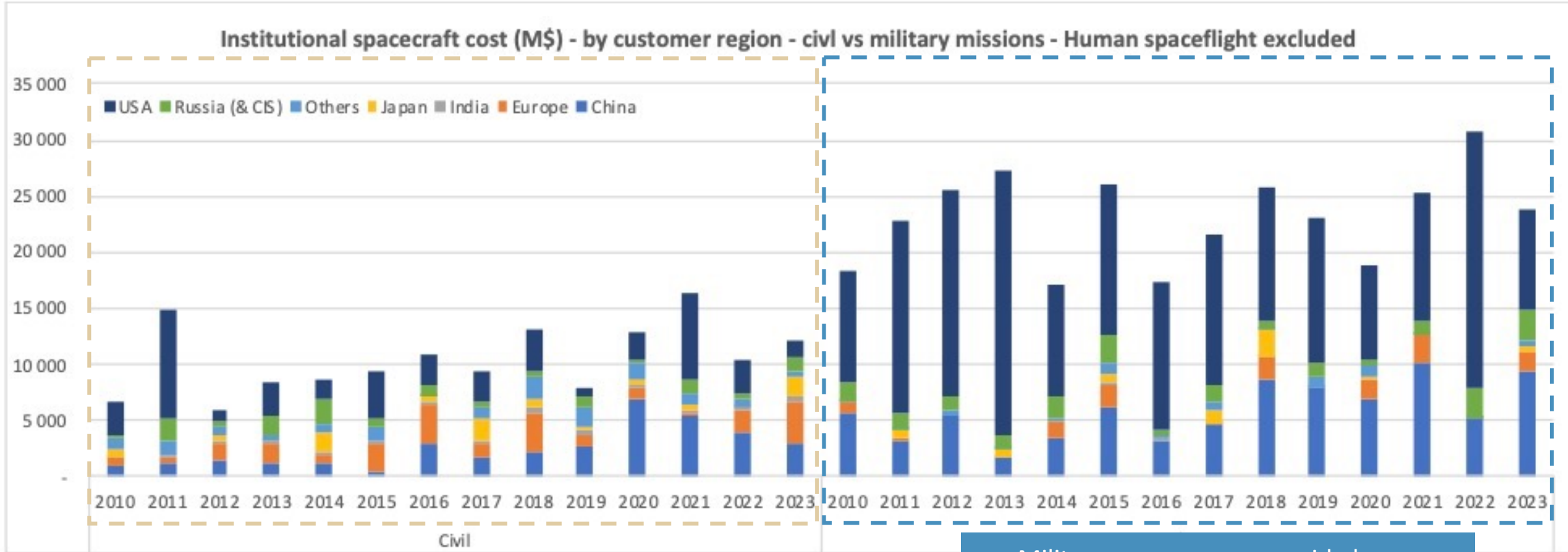


Civil satellite institutional programmes:
decreasing trend

Military satellite institutional programmes:
growth trend
Important chinese 'catch-up'

Key trends in institutional programmes

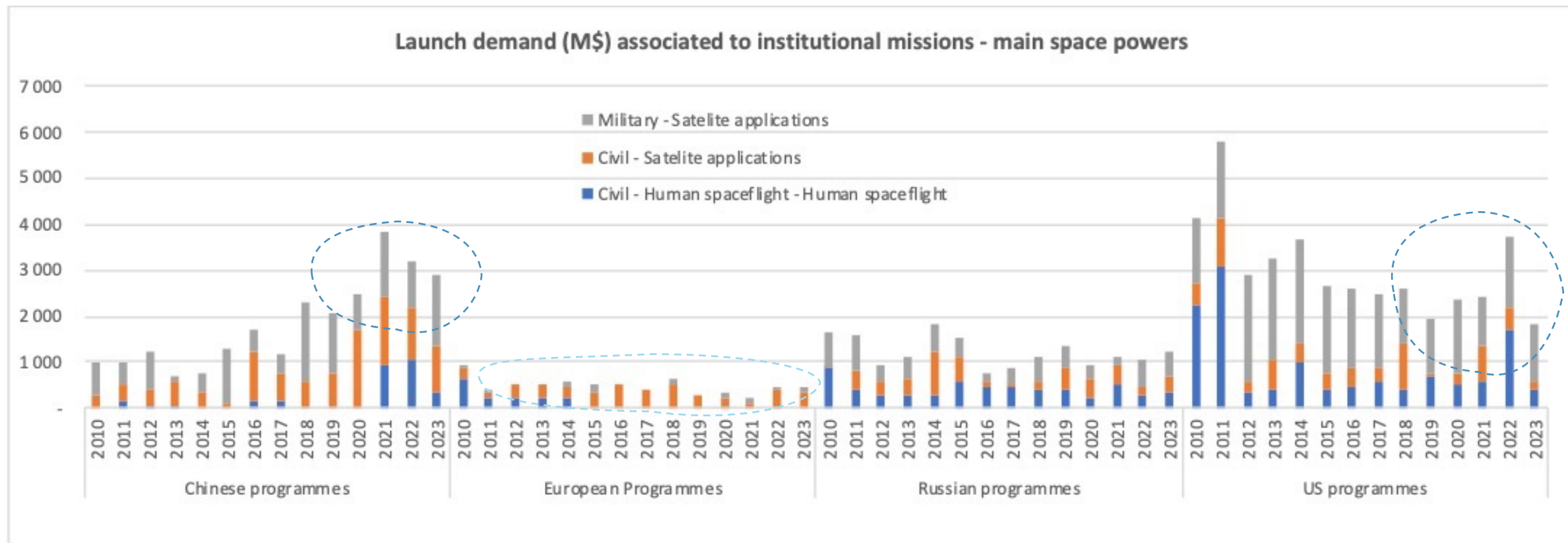
civil vs military programmes



Military programmes provide larger business opportunities, 2,5x more than civil programmes

Key trends in institutional programmes

Institutional launch demand



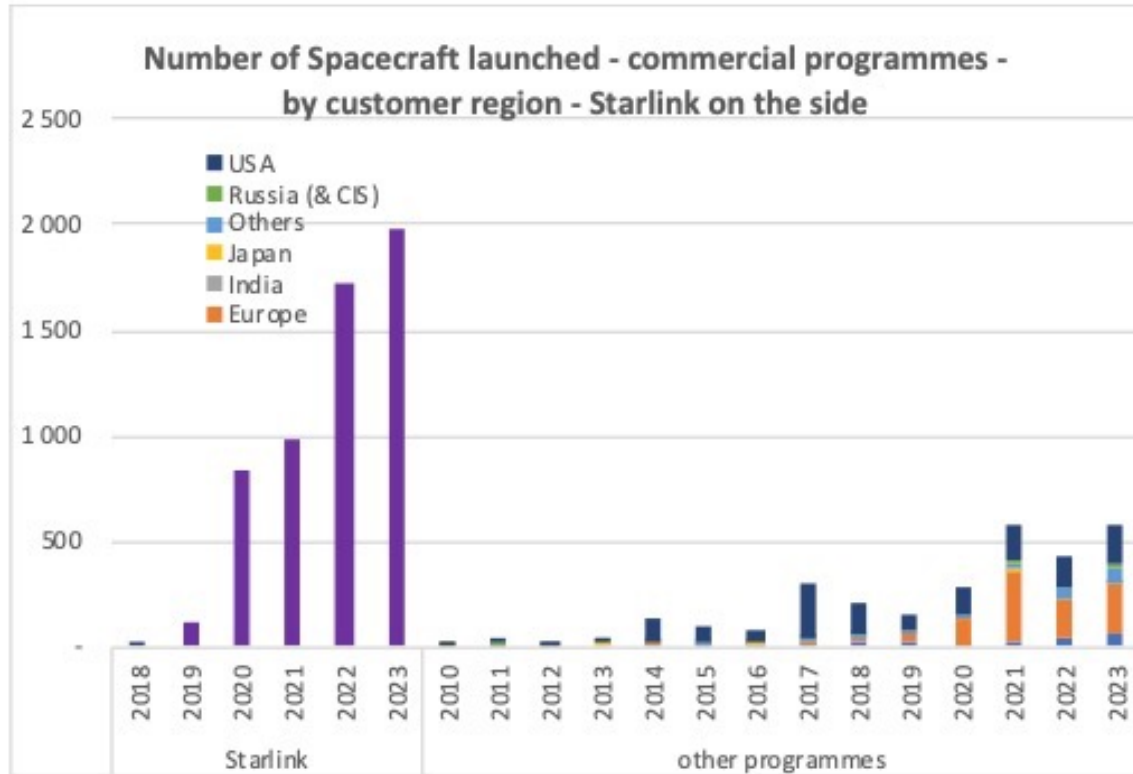
The USA and China have the highest institutional launch demand: 2-3B\$/year

The European launch demand is less than 300M\$/year and <4 launches/year

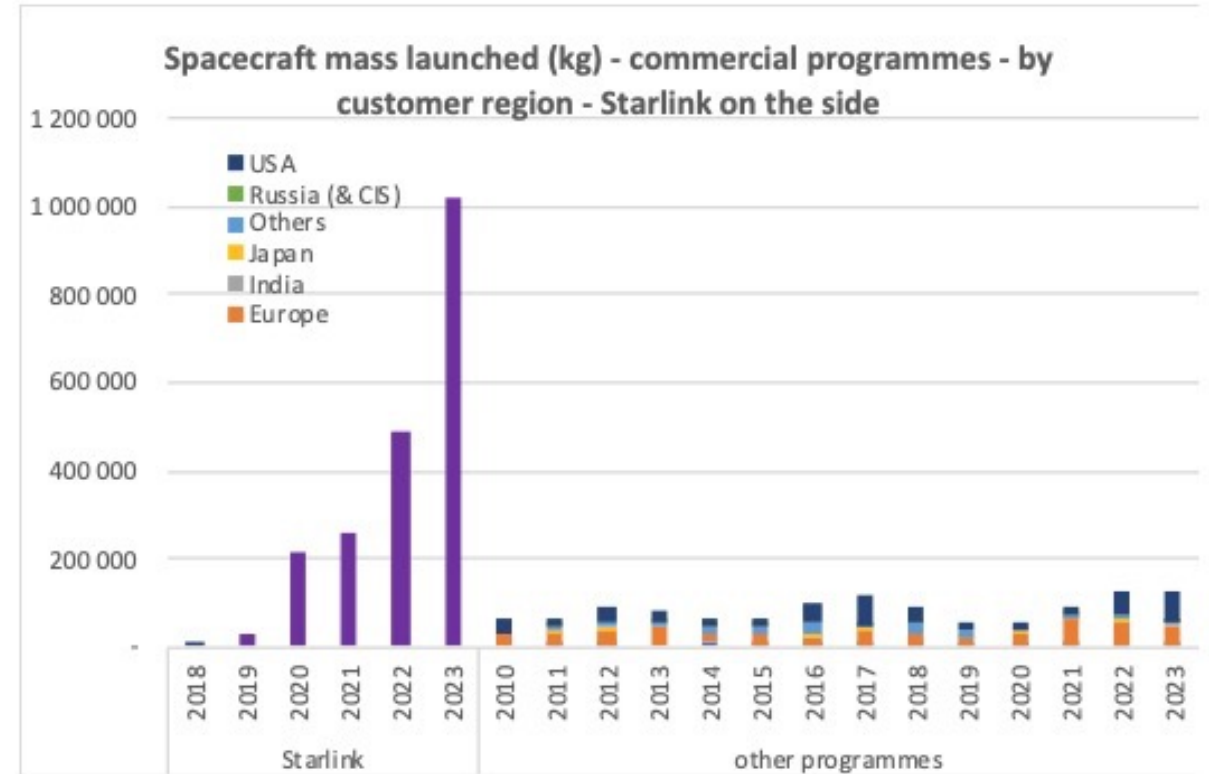
Europe does not have a sizeable military programme nor an independent human spaceflight programme

Key trends in commercial programmes

Overview



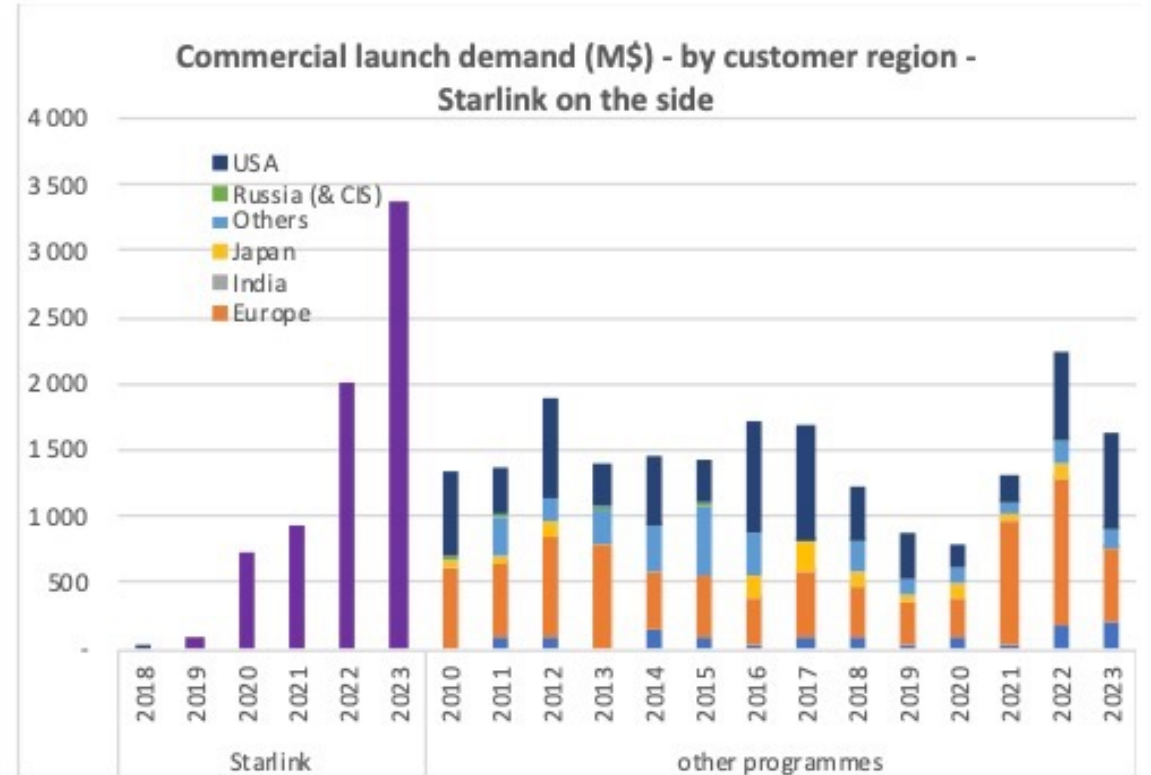
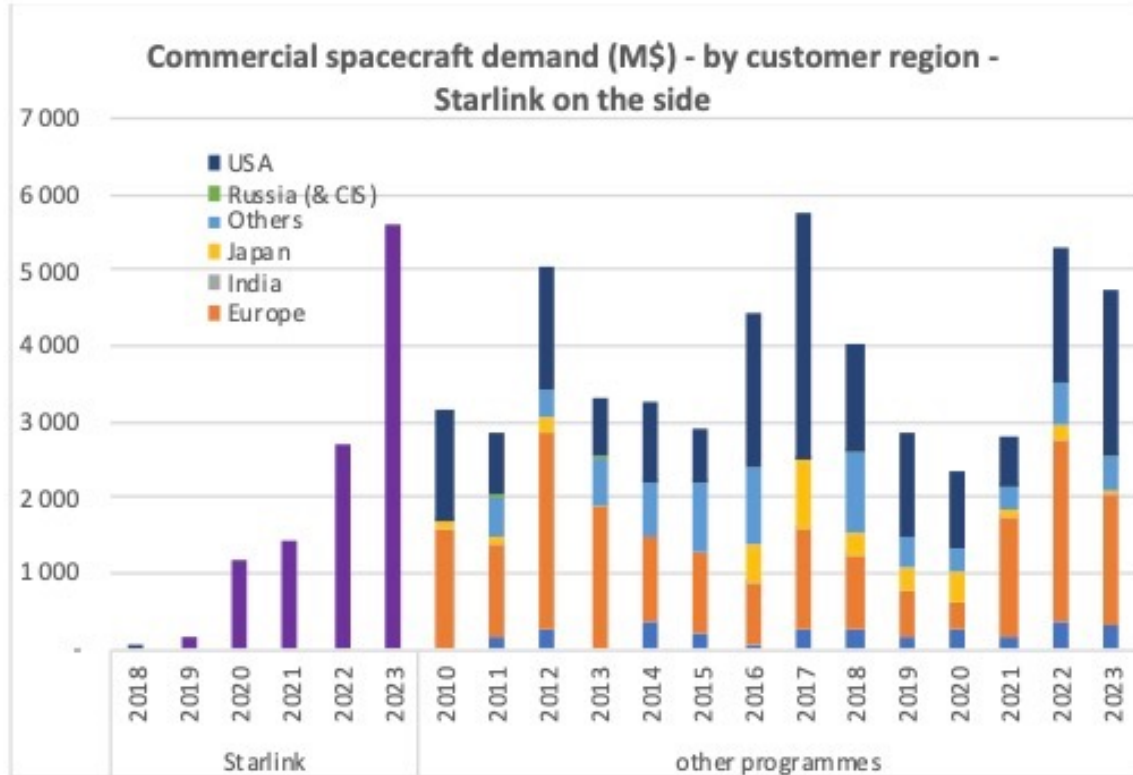
There is a growth of spacecraft numbers.



But only Starlink is actually providing incremental activity

Key trends in commercial programmes

Spacecraft and launch market



In terms of spacecraft market, Starlink business is very low (in proportion to mass)

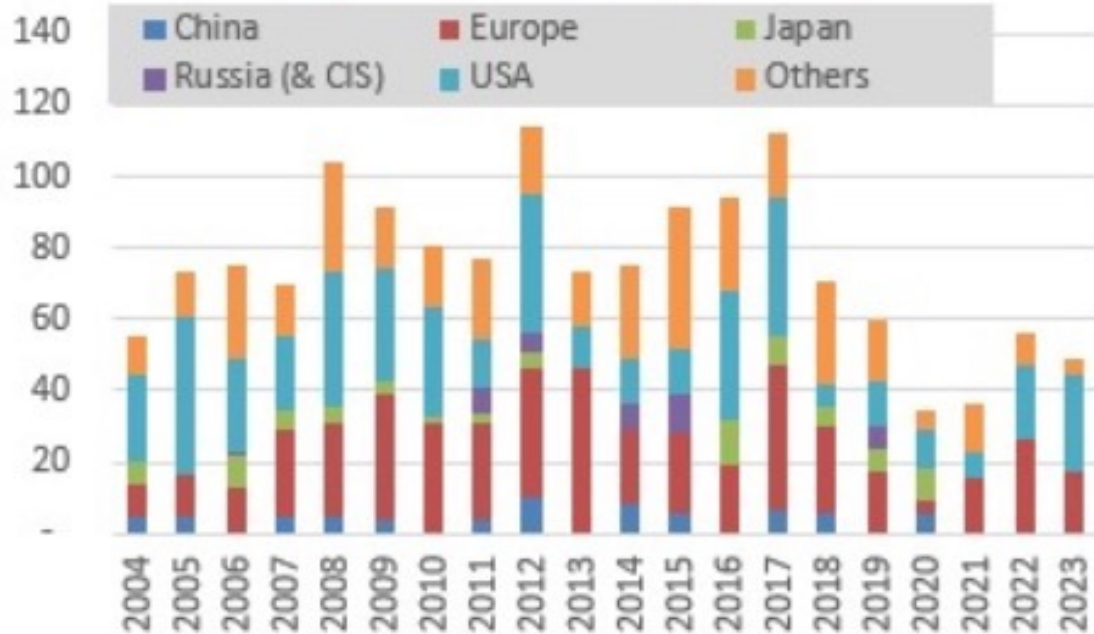
Starlink launch is the #1 commercial launch market segment*

*valued at 'market price' – if valued at 'company cost' it would be 50% less

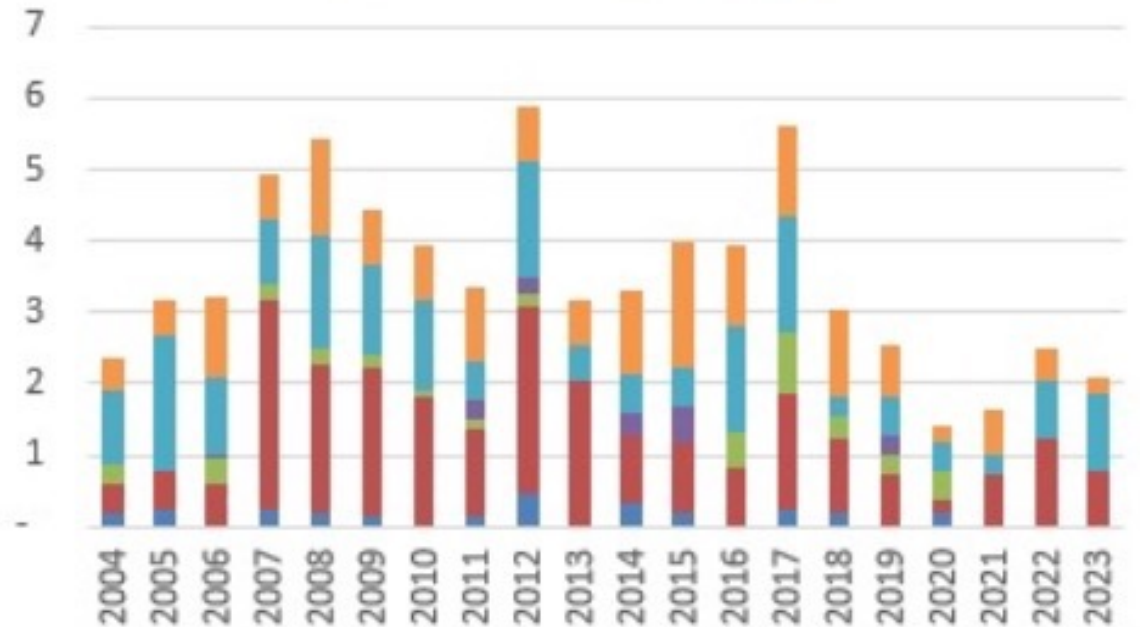
Key trends in commercial programmes

The GEO segment


Commercial GEO telecommunications spacecraft mass by customer region (Tonnes)



Commercial GEO telecommunications spacecraft value by customer region (B\$)



The GEO commercial demand is decreasing
 Avg >3B/year in 2004-2013
 Avg <2B/year in 2014-2023

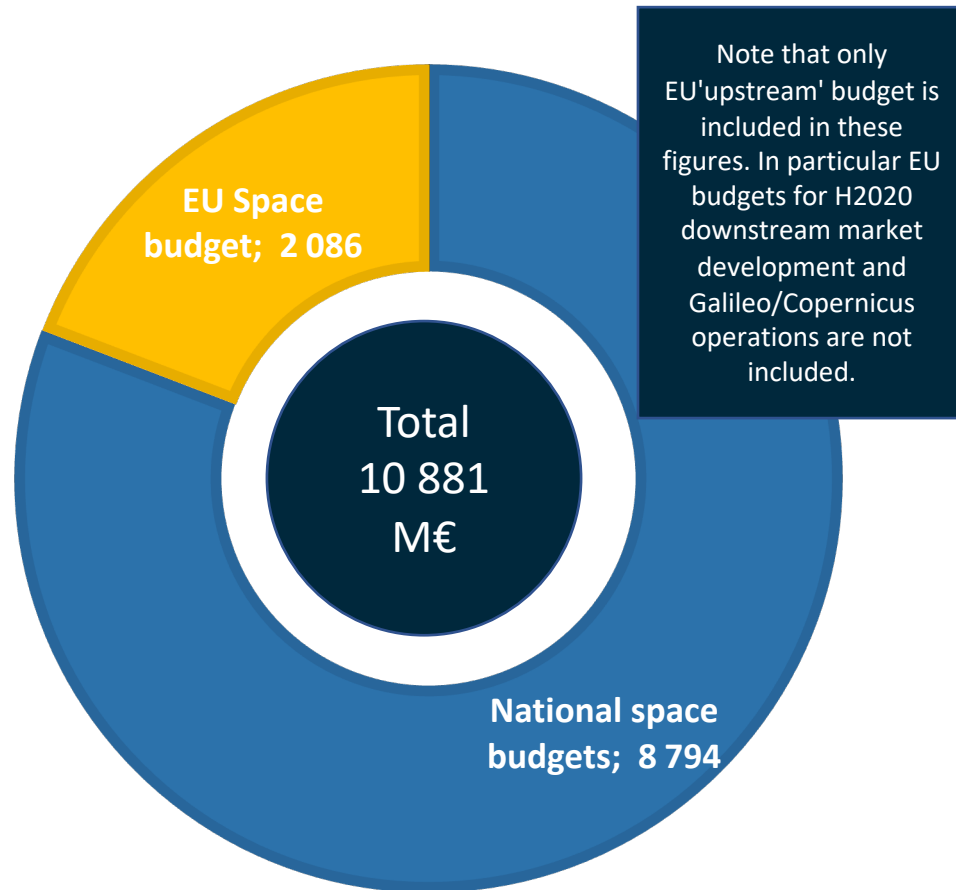
A wide-angle, high-angle photograph of a large satellite component, possibly a payload bay or instrument module, inside a cleanroom facility. The component is wrapped in crinkled silver thermal blankets and is positioned in the center of a large, circular, dark-colored structure. Several people in white cleanroom suits are visible around the perimeter, standing on yellow safety railings. In the background, a large white dome-shaped structure is visible through an opening in the facility. The lighting is bright and even, highlighting the metallic surfaces and the intricate details of the satellite component.

European space budgets

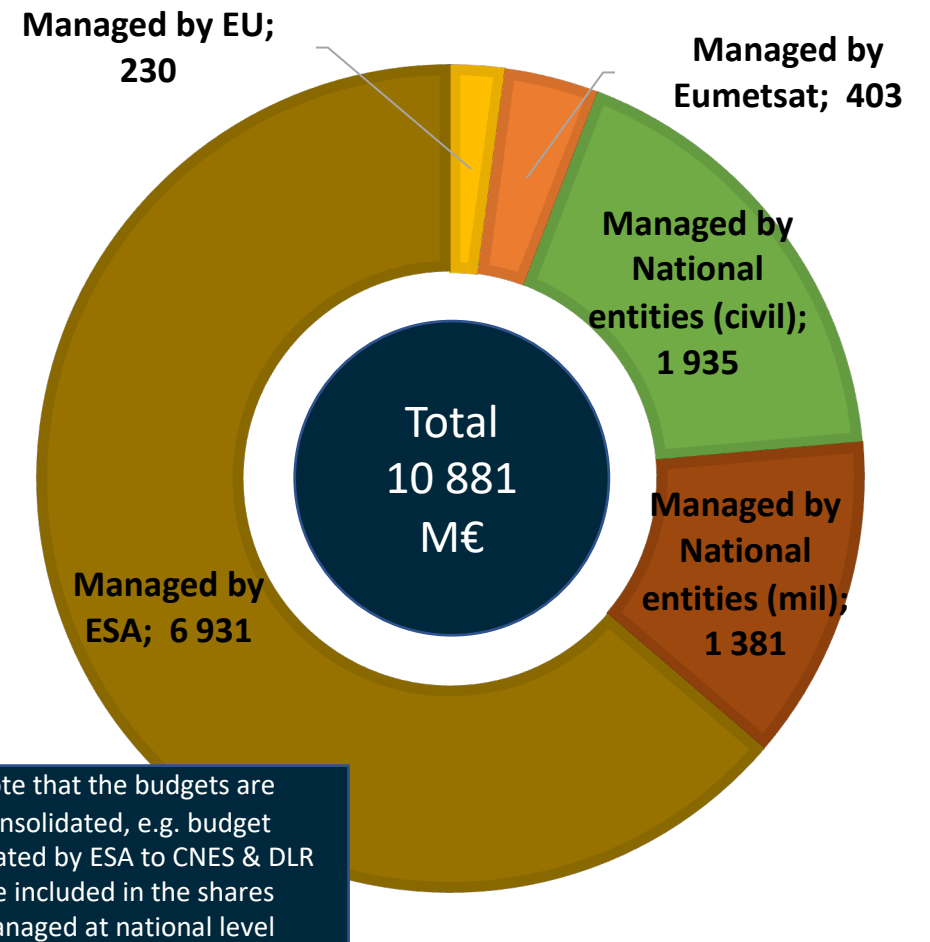
Consolidated

European Consolidated Space (upstream) Budget 2023

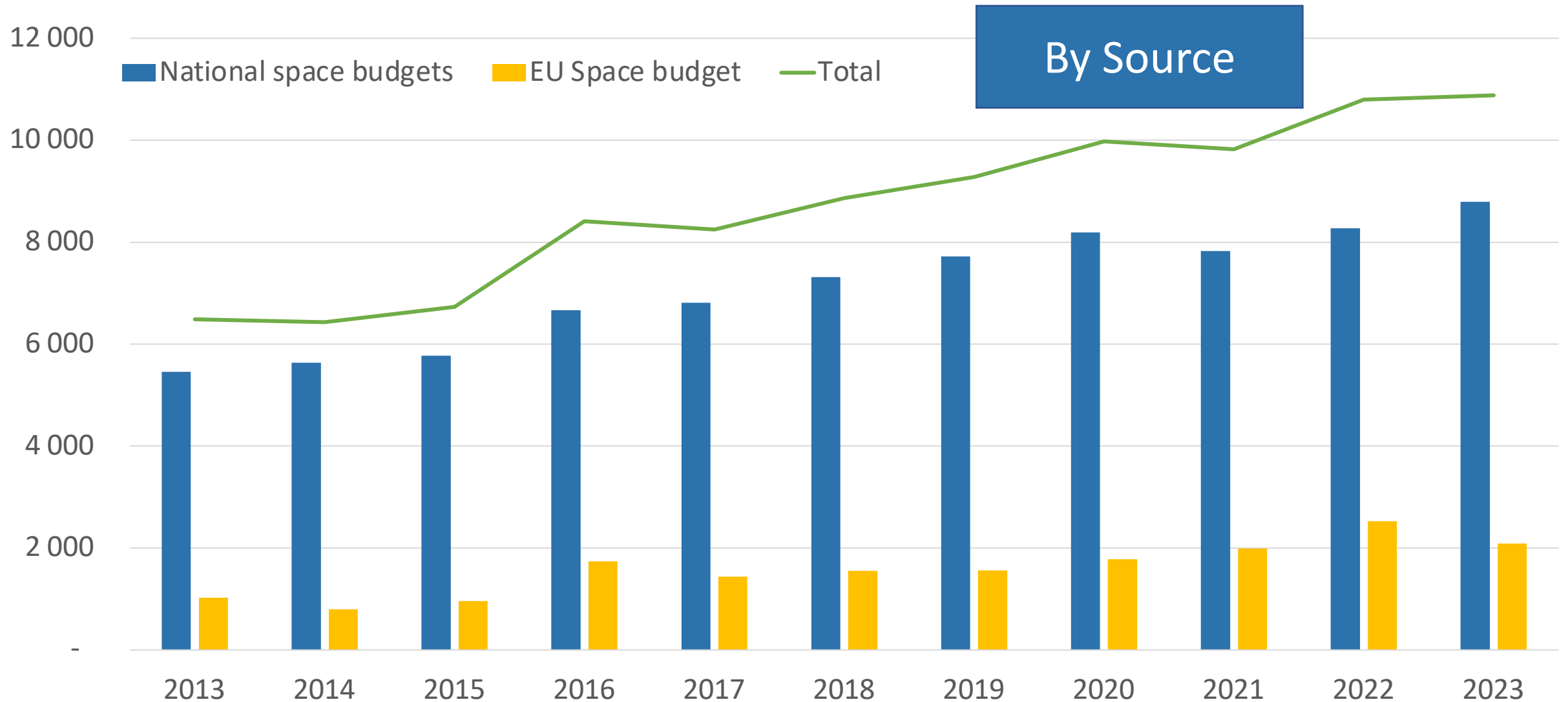
By source M€



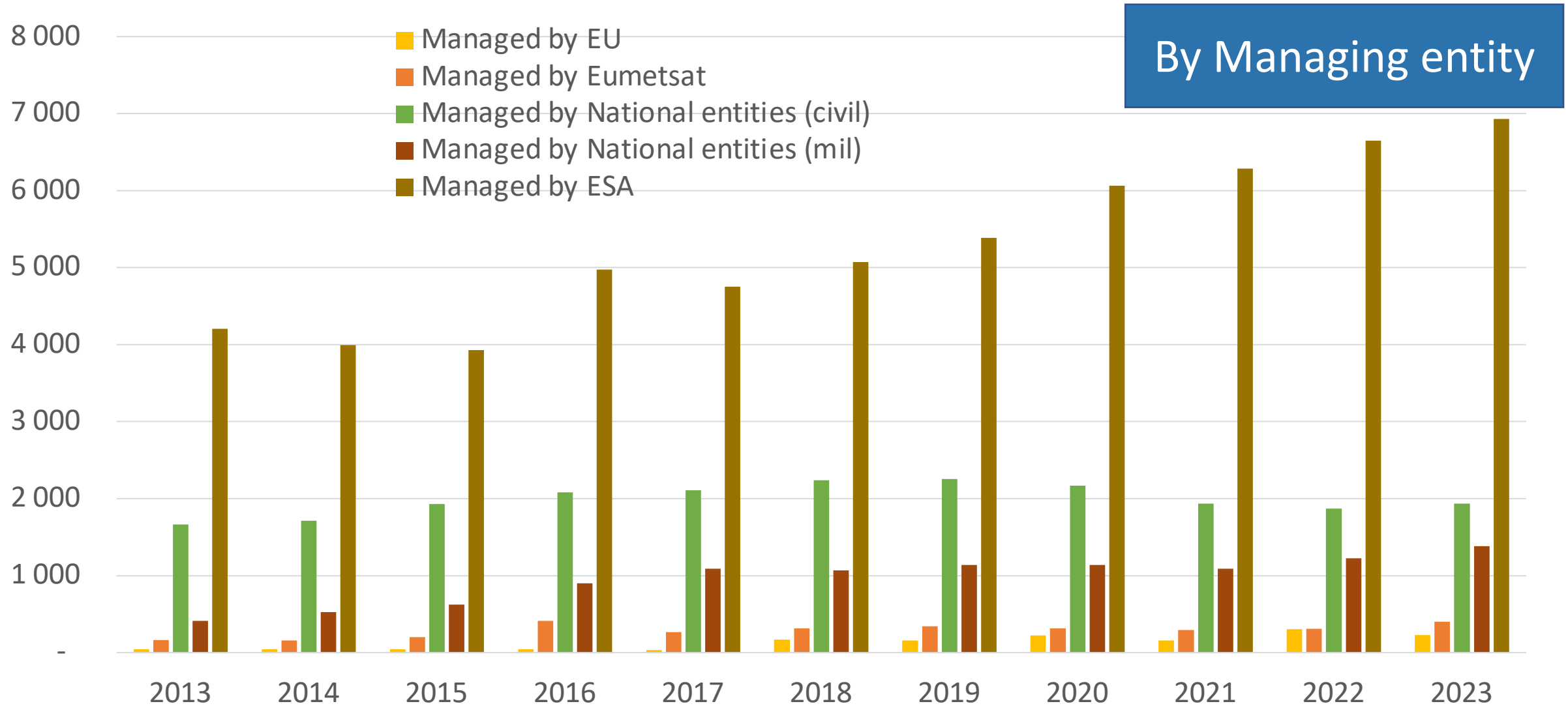
By implementing entity M€



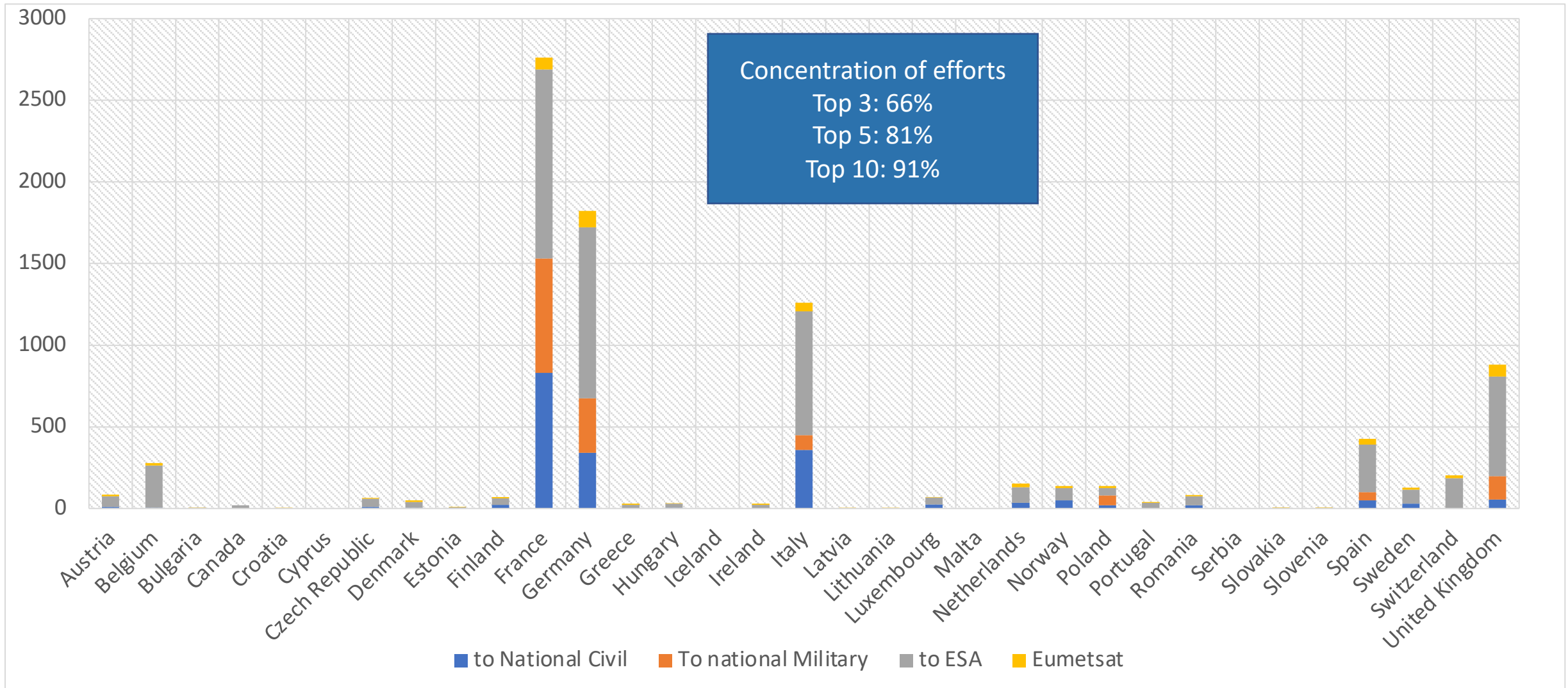
European Consolidated Space Budget 2013-2023 M€



European Consolidated Space Budget 2013-2023 M€



'Small' and 'large' national space budget sources 2023 M€





Eurospace facts & figures survey

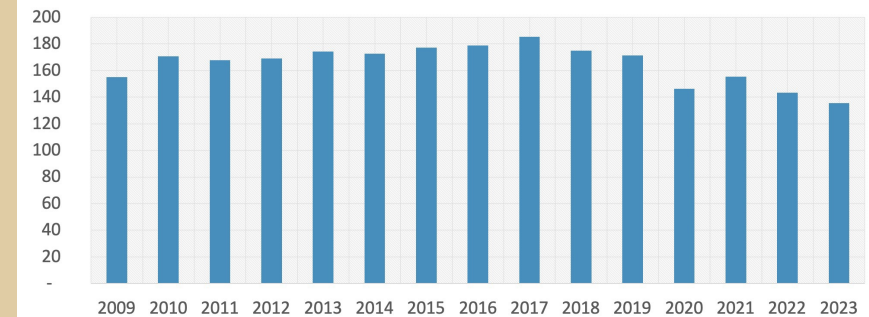
Main results

Introduction to the survey

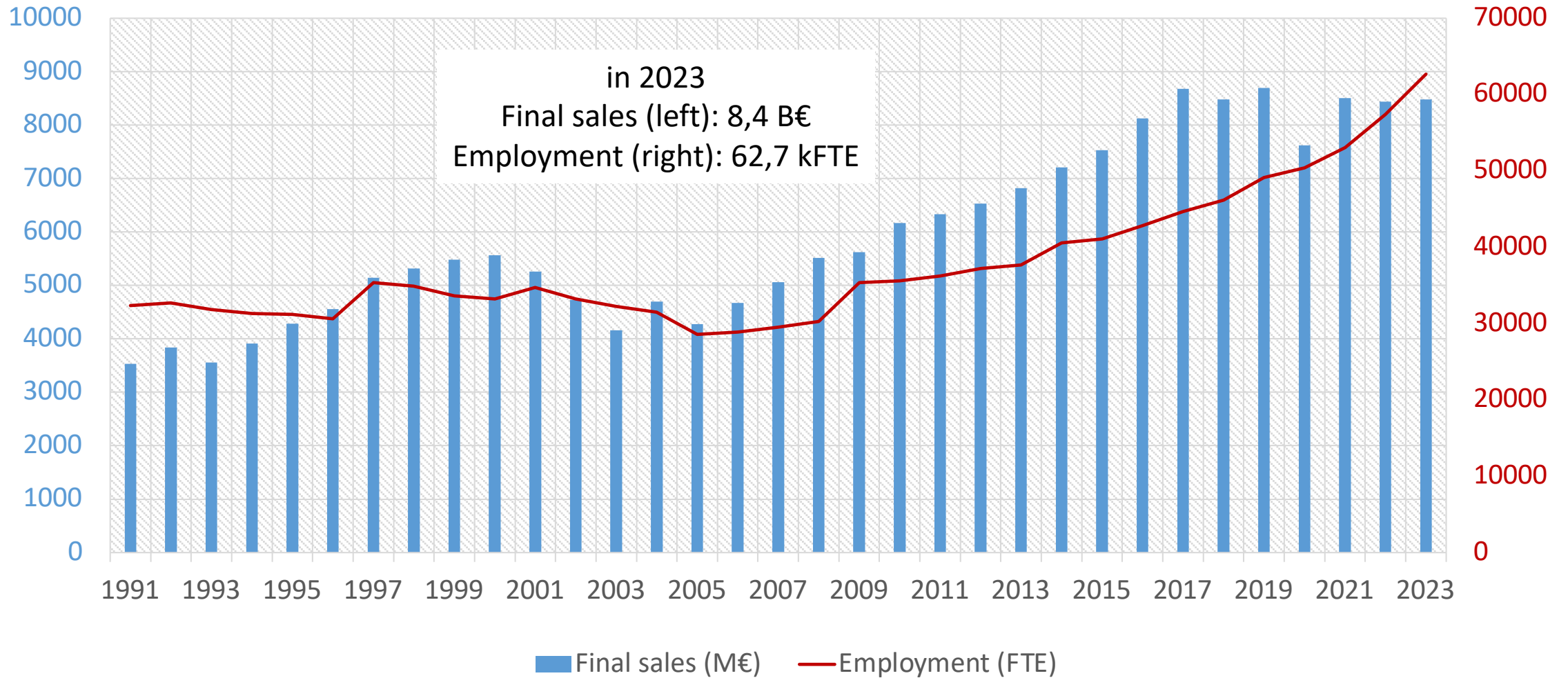
- The 28th edition (2024 release) of the annual facts and figures report will be available later in July 2024.
- The 2024 report is available to selected institutional contacts, the Media, Eurospace members and to all the companies that have supported the survey.
- All others will find on www.eurospace.org the 2023 edition for free download.
- The European space industry has registered a very limited growth of sales (200M€), to 8,4B€ in 2023
- The European space manufacturing sector has recovered partly from the Covid-19 sales drop, but some market segments are still affected by structural slowdown (commercial satellite and launcher segments)
- Employment figures, in contrast, are still in growth now topping at 62659 FTE in 2023.
- This is a subject of growing concern, considering that most of the growth is fuelled by the major hiring spree of newcomers in the sector (the new space start-ups)
- Due to low/no revenues of many newcomers, the workforce productivity of the sector is dropping
- **135k€/worker in 2023, vs >170k€/worker in the period 2010-2019.**

Survey statistics	Nb of units	Final sales M€	Space empl.
All units in the model	559	8429	62659
Units updated	260	7031	46883
Proxies	299	1399	15378
Survey representativeness	47%	83%	75%

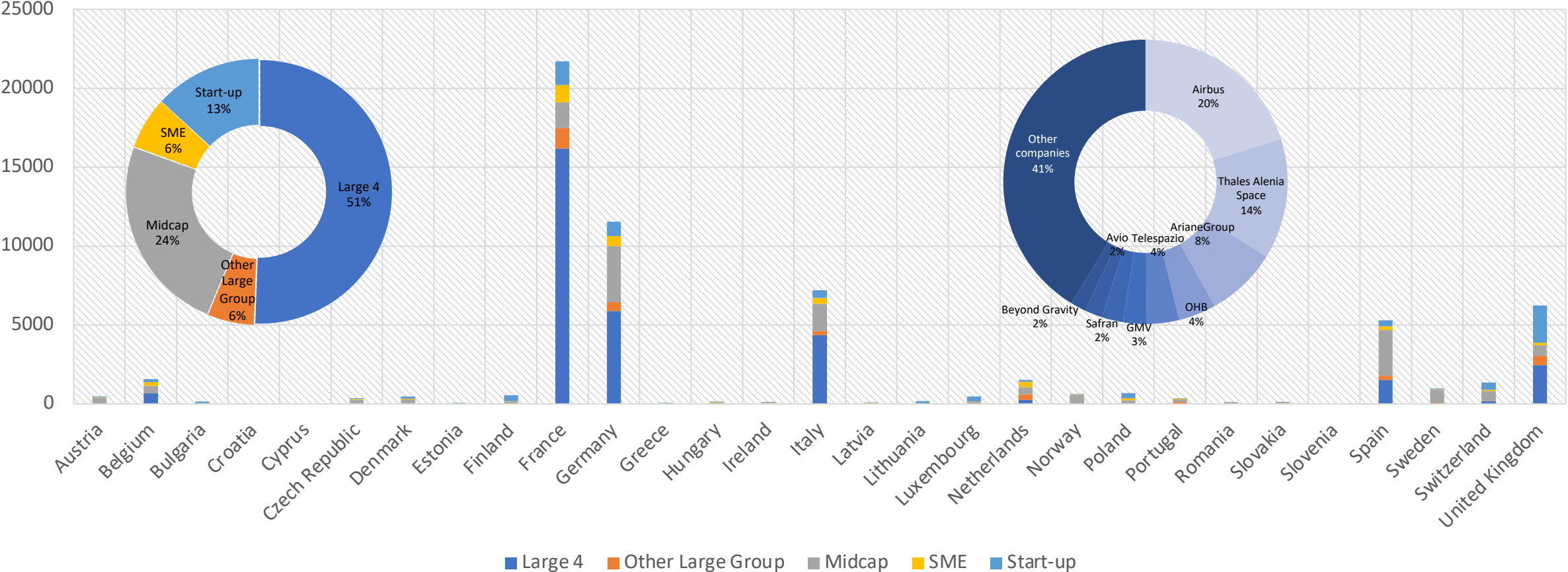
European space industry average apparent worker productivity (k€)



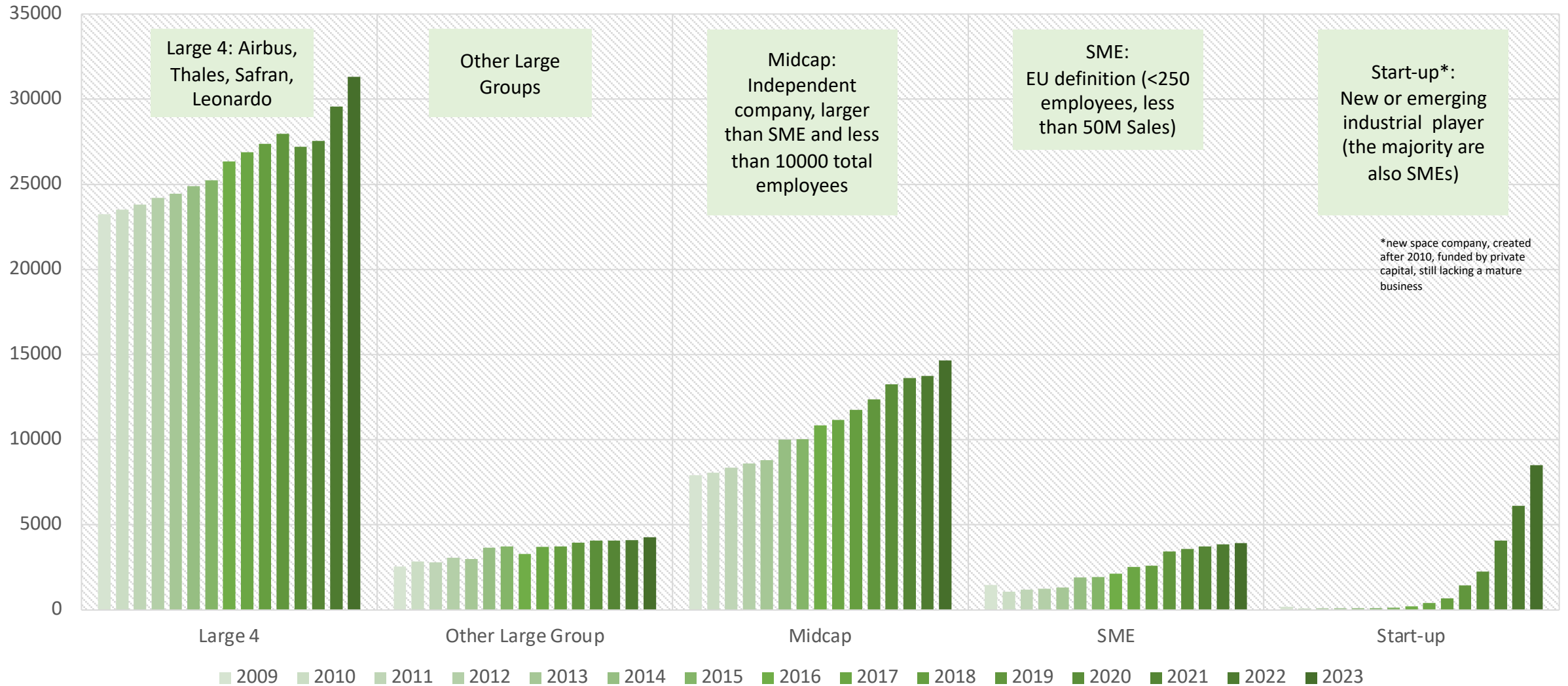
European space industry sales (M€) & employment (FTE)



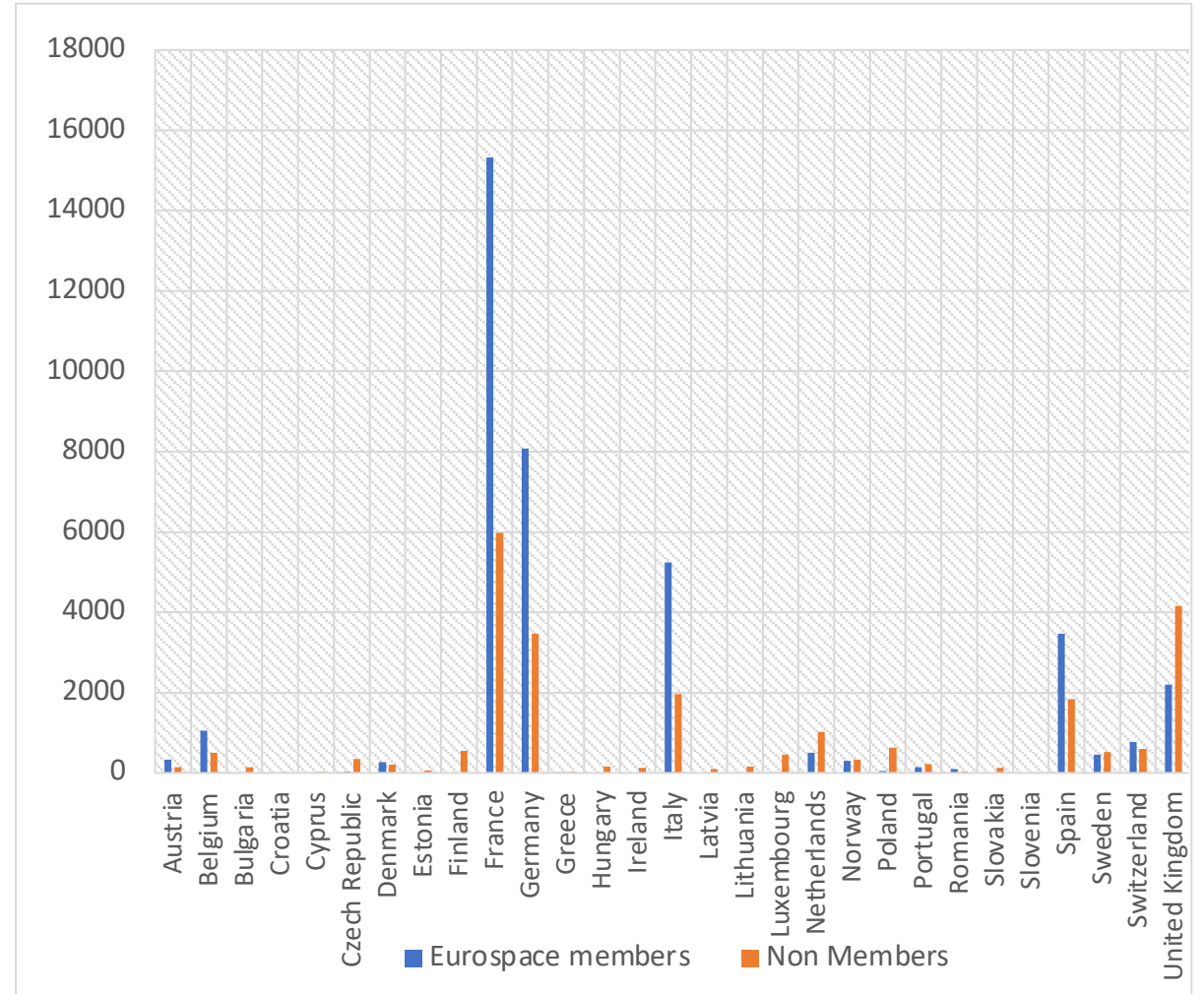
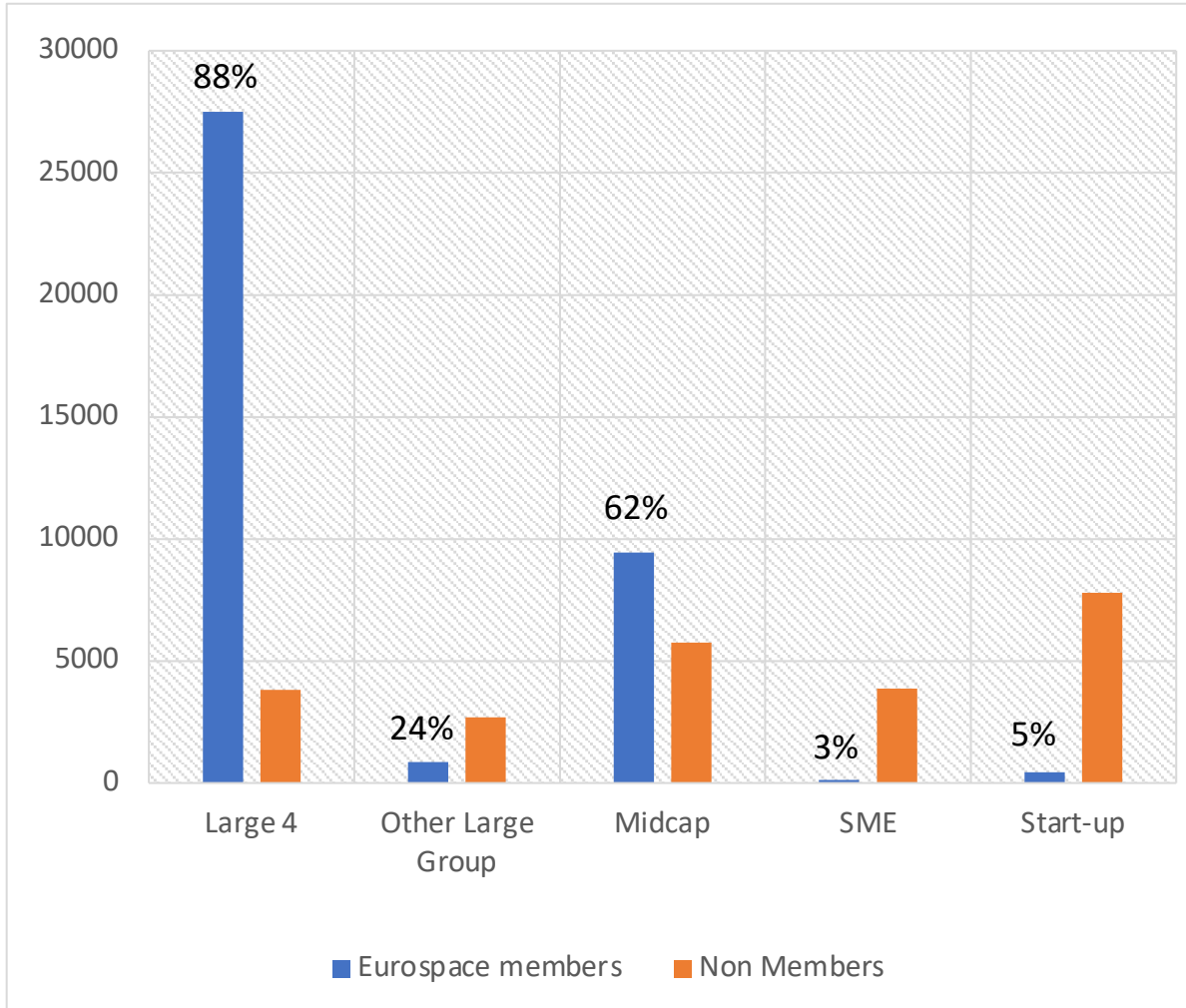
Employment distribution by country, company type and corporate entity - FTE



Employment trends by company type - FTE

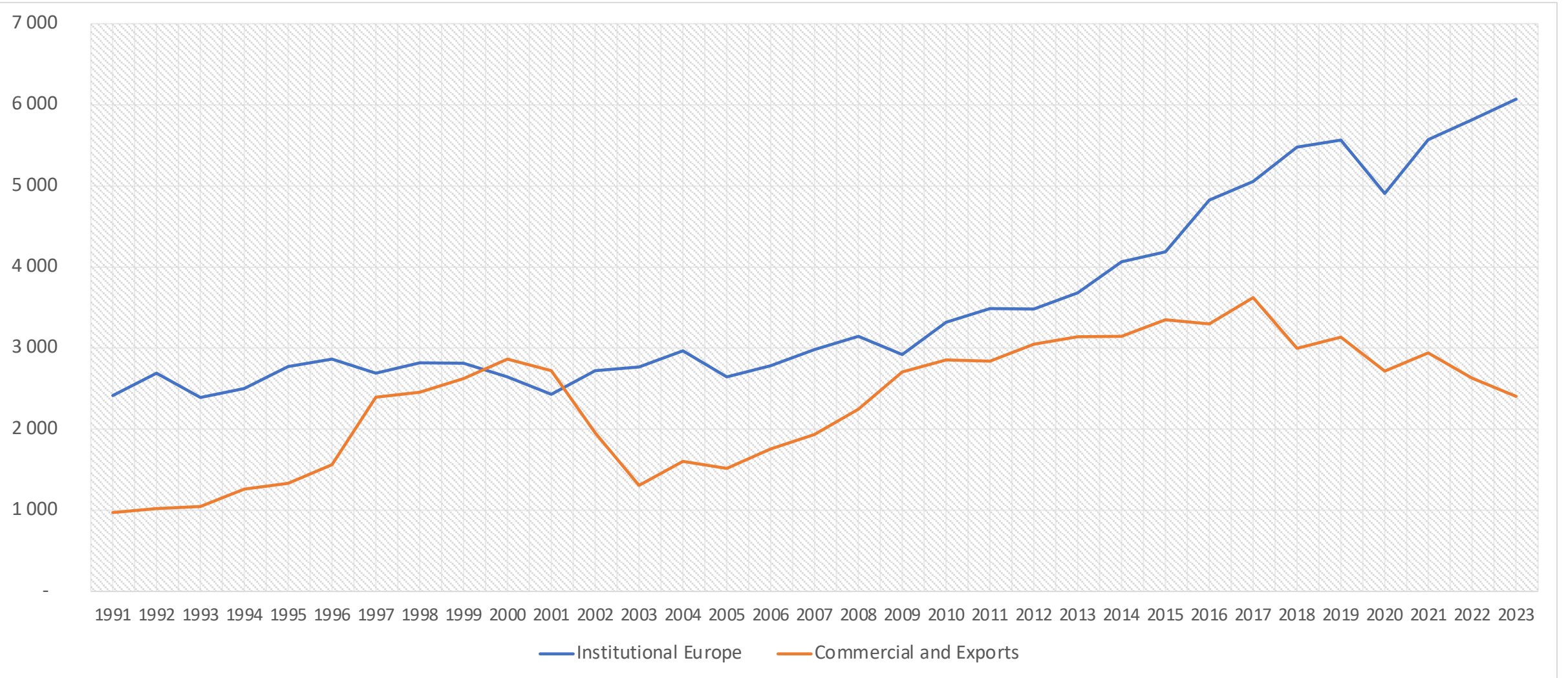


Eurospace members representativeness (62% of FTE)



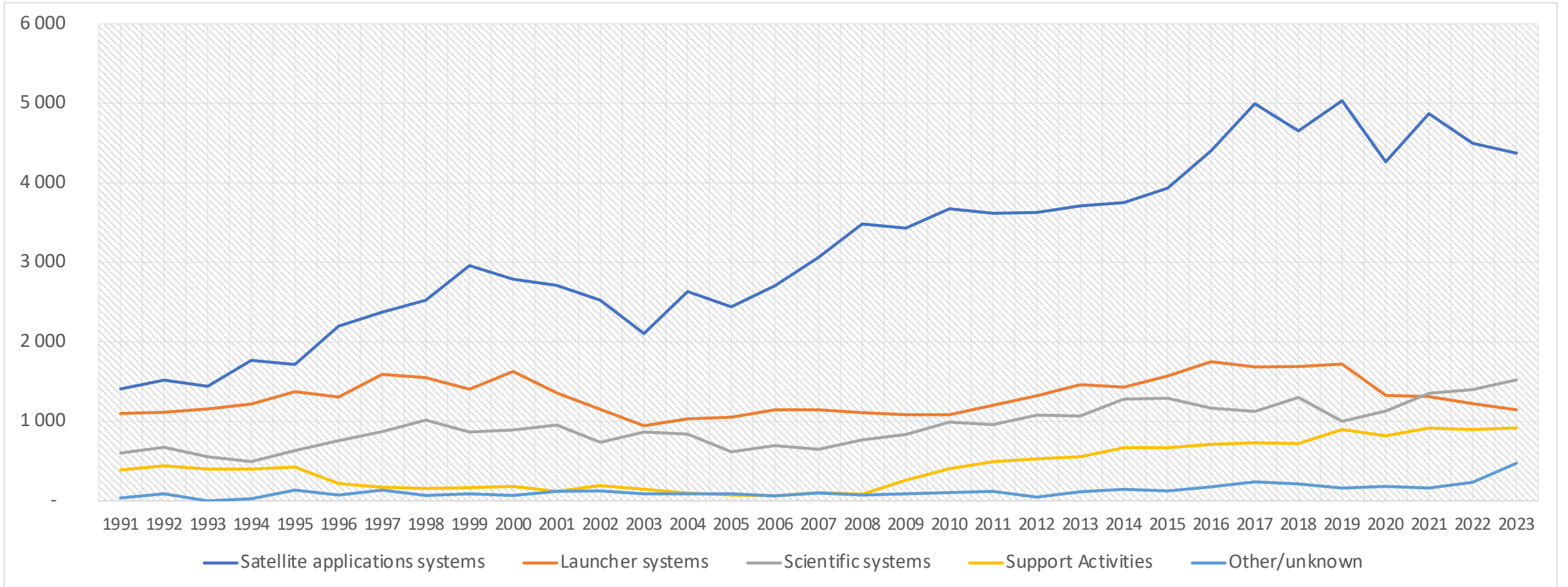
European space industry sales by main customer segment

M€ current e.c.



European space industry sales by main product segment

M€ current e.c.

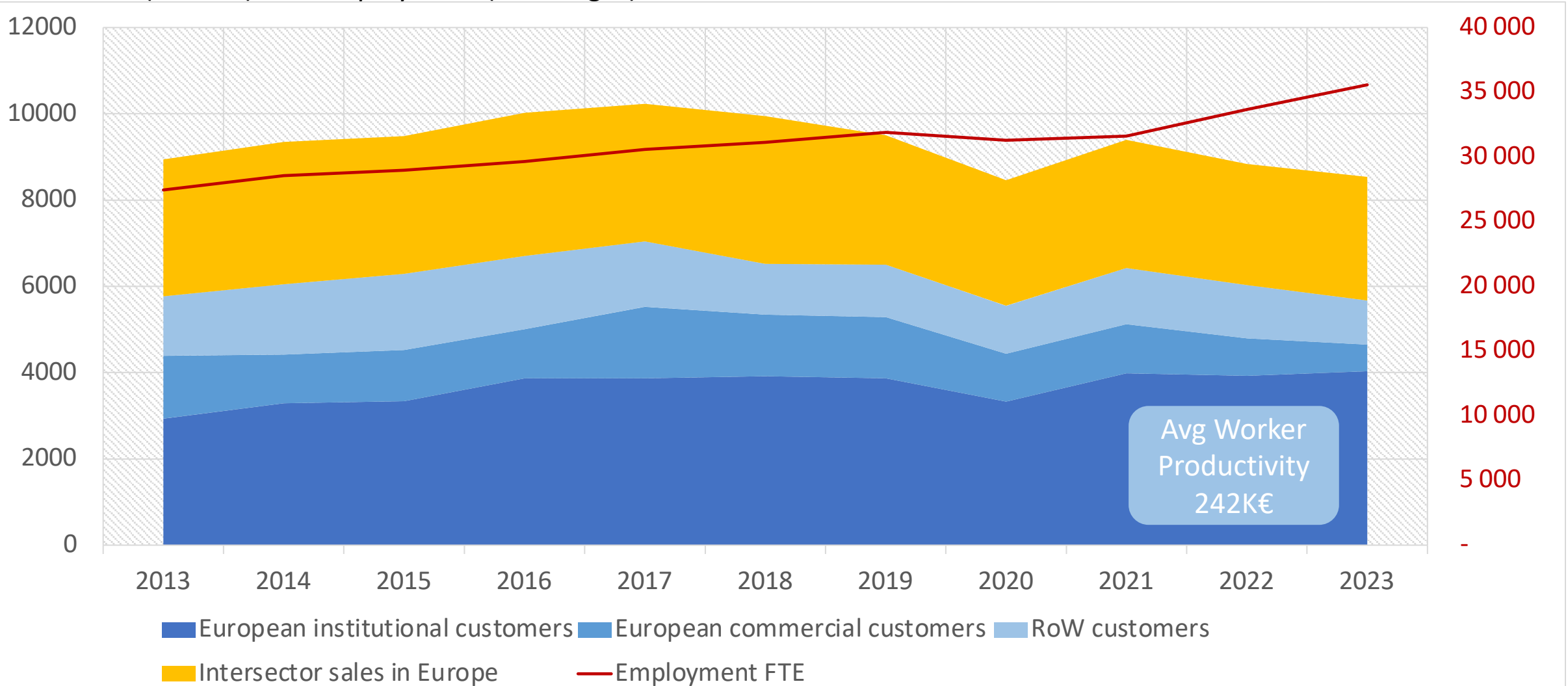




Industry segments dynamics

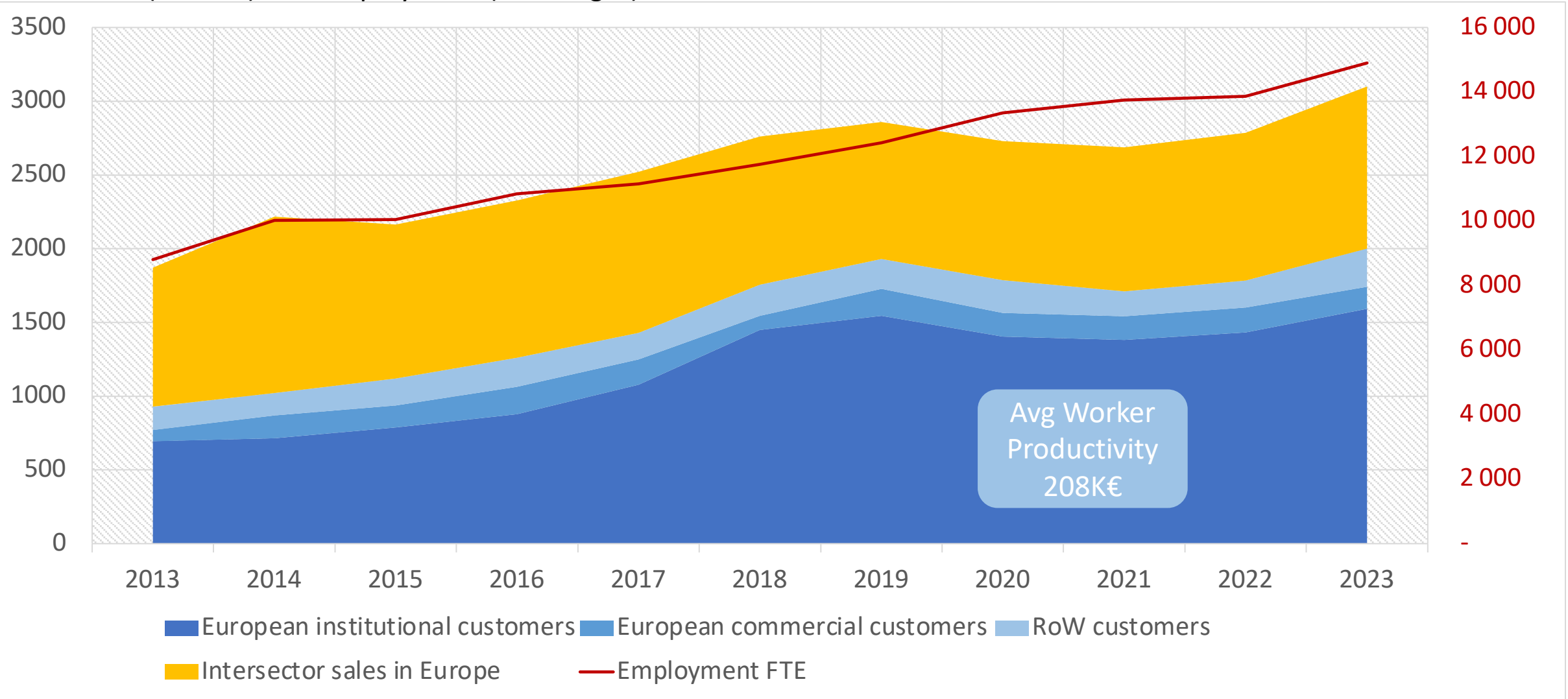
Large Groups evolution profile

total sales (M€ left) and employment (FTE – right)



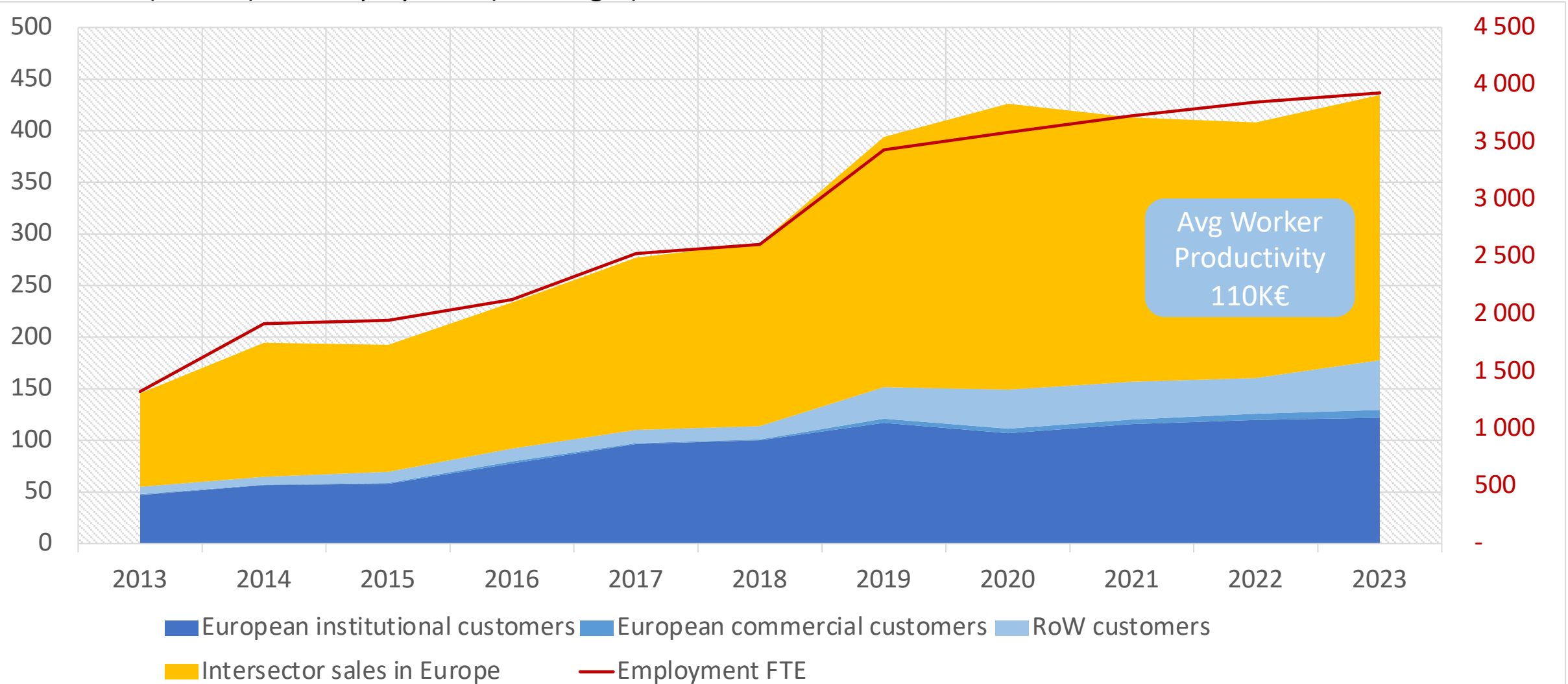
Midcaps evolution profile

total sales (M€ left) and employment (FTE – right)



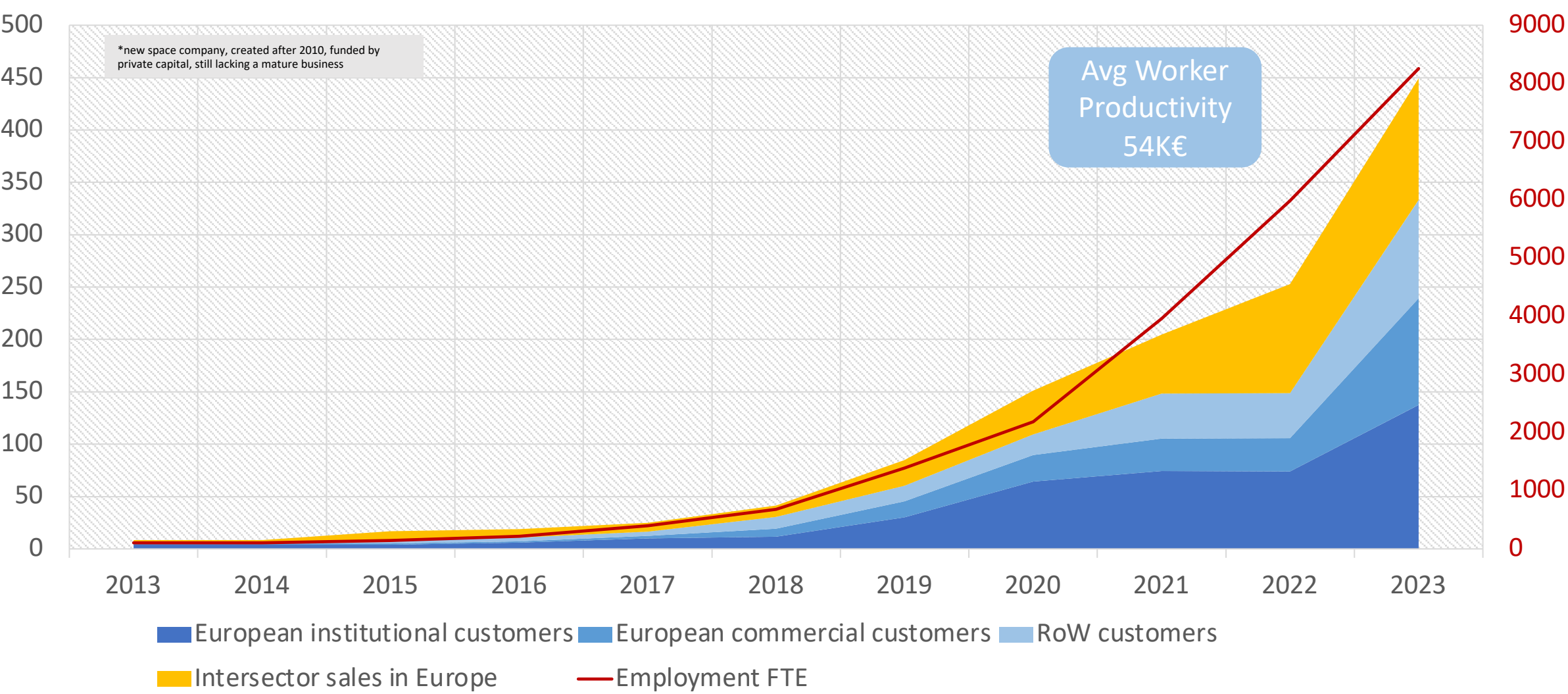
SMEs evolution profile

total sales (M€ left) and employment (FTE – right)



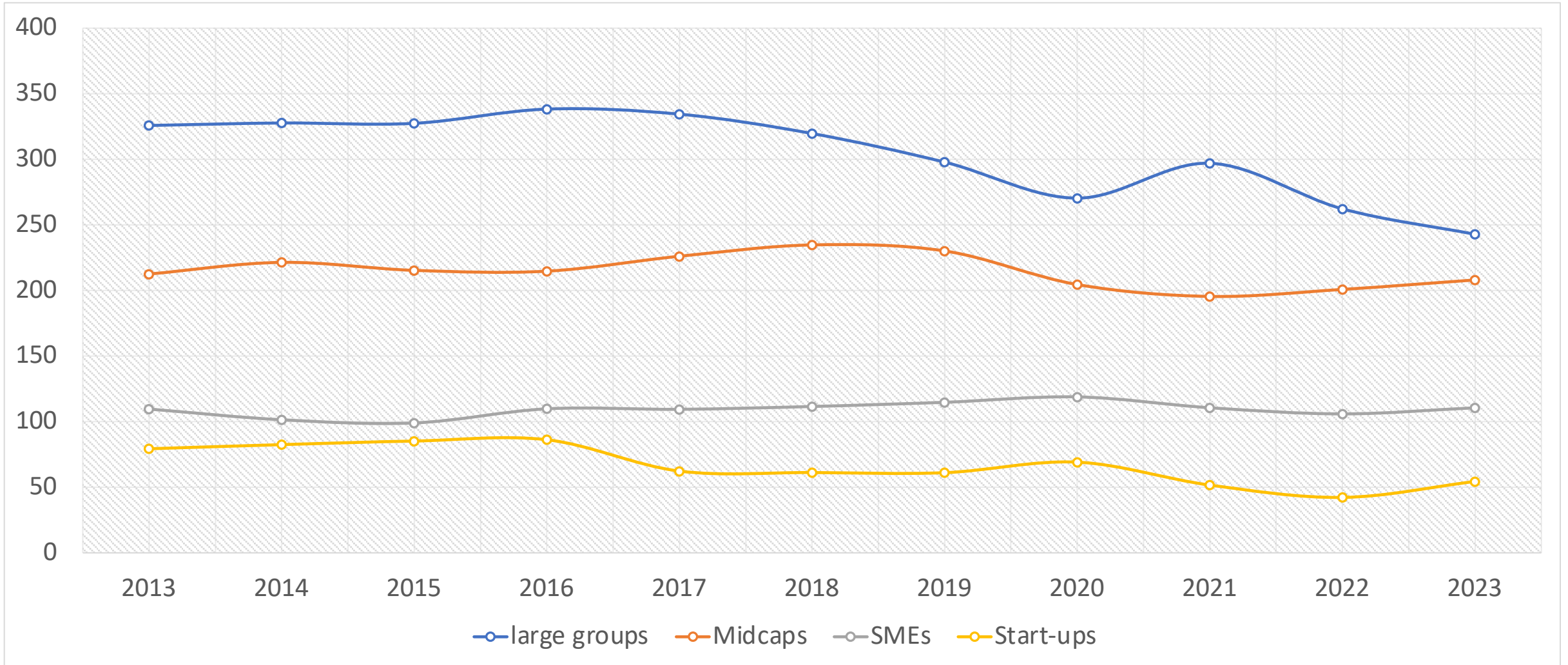
Start-ups* evolution profile

total sales (M€ left) and employment (FTE – right)



Evolution of apparent worker productivity

by industry segment
in k€/FTE



Main data series

Final Sales by customer and product segments M€

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Final Sales (All)	5 707	6 255	6 391	6 601	6 913	7 279	7 589	8 204	8 776	8 586	8 814	7 721	8 617	8 251	8 458
Sales to customers in the sales to ESA+EU area															
Sales to ESA	1 919	2 141	2 236	2 303	2 442	2 640	2 699	3 269	3 383	3 615	3 653	3 135	3 607	3 602	3 725
Sales to the European Commission	26	25	35	48	50	58	92	96	52	182	153	161	224	242	238
Sales to public satellite operators	60	112	109	46	43	37	97	91	85	65	65	57	57	84	98
Sales to other civil public agencies	563	617	715	807	817	863	759	792	849	919	992	1 036	1 061	979	1 048
Sales to military institutions	351	422	394	278	326	464	538	577	687	700	702	517	611	652	775
Sales to private satellite operators (Europe)	602	783	915	867	688	419	388	490	847	637	767	639	687	452	442
Sales to European Launch Operators (e.g. Arianespace)	792	682	728	843	849	870	949	844	981	894	854	660	647	621	436
Sales to other companies in the sector *	3 723	3 547	3 659	4 159	4 205	4 628	4 369	4 542	4 456	4 617	4 194	4 175	4 251	4 161	4 334
Other sales of space products in the EU	82	84	62	71	92	72	56	83	96	105	115	99	117	104	208
Final sales in the Europe area	4 395	4 866	5 195	5 263	5 309	5 423	5 578	6 242	6 981	7 117	7 299	6 304	7 011	6 736	6 970
Sales to customers in the Rest of the World															
sales to public satellite operators (RSCC etc)	301	362	278	331	382	256	244	79	144	112	111	121	167	133	69
Sales to civil public agencies	104	115	90	156	274	398	370	406	384	323	443	239	253	181	178
sales to military institutions (US DoD, etc.)	4	68	16	17	9	130	235	254	282	161	143	98	39	53	60
Sales to private satellite operators	441	457	359	424	459	576	611	637	396	320	254	283	521	457	419
Sales to other companies in the sector*	406	350	428	371	422	434	506	531	508	495	514	651	572	662	702
Other sales of space products outside EU	56	36	26	40	58	62	45	56	80	57	50	25	54	28	60
Final sales RoW	1 312	1 389	1 196	1 338	1 604	1 856	2 011	1 963	1 795	1 468	1 515	1 417	1 607	1 515	1 487
	2 009	2 010	2 011	2 012	2 013	2 014	2 015	2 016	2 017	2 018	2 019	2 020	2 021	2 022	2 023
Launcher	1 085	1 082	1 205	1 320	1 461	1 429	1 570	1 751	1 684	1 692	1 723	1 325	1 313	1 224	1 145
Telecommunications systems	1 949	1 865	1 846	1 926	2 002	1 893	2 007	1 891	2 143	1 797	1 917	1 677	1 879	1 578	1 301
Earth Observation systems	963	894	915	1 000	896	1 009	1 050	1 656	1 884	1 683	1 891	1 499	1 627	1 610	1 681
Navigation systems	205	362	414	397	389	415	449	202	284	378	417	341	477	473	458
Satellite applications	3 118	3 121	3 174	3 323	3 288	3 317	3 506	3 750	4 311	3 857	4 226	3 517	3 983	3 661	3 440
Science & exploration	456	541	548	662	681	863	911	818	878	1 029	723	768	822	849	843
Space infrastructure (Human support, ISS, OOO, AD)	344	391	351	361	344	358	340	307	211	239	246	333	502	524	640
Microgravity (racks, experiments)	36	61	58	56	42	59	41	39	34	32	30	28	30	27	38
Scientific programmes	836	993	957	1 079	1 067	1 280	1 292	1 165	1 123	1 300	999	1 129	1 354	1 399	1 521
EGSE, MGSE (test & support equipmt)	69	135	83	101	103	85	88	103	98	120	142	85	75	68	53
Ground stations (TT&C, UL/DL...)	315	551	444	302	424	437	425	653	684	798	808	748	890	838	931
Professional services	193	271	408	429	454	585	583	608	636	604	755	734	841	829	894
Ground segment	577	957	935	833	980	1 107	1 097	1 365	1 418	1 522	1 705	1 567	1 806	1 735	1 878
Other & unknown	91	102	120	47	117	146	124	174	240	215	161	184	162	232	473
Total	5 707	6 255	6 391	6 601	6 913	7 279	7 589	8 204	8 776	8 586	8 814	7 721	8 617	8 251	8 458

Main data series

Direct employment FTE

Direct Space employment	32340	32706	31862	31327	31186	29195	37388	36880	35607	35207	36728	35256	34238	33480	30589	30878	29506	30301	35376	35596	36261	37234	37684	40578	41102	42829	44678	46161	49152	50410	53061	57383	62659	
Country/Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
Austria	na	na	na	na	na	250	220	210	203	189	195	197	263	289	294	279	290	301	318	322	333	336	348	366	378	374	395	434	443	441	466	478	480	
Belgium	na	na	na	na	na	1550	1592	1605	1447	1351	1305	1223	1123	1193	1189	1187	1288	1284	1842	1582	1612	1452	1516	1678	1729	1719	1501	1511	1495	1481	1452	1477	1559	
Bulgaria	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	76	102	117	135	140		
Croatia	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	
Cyprus	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	25	25	25	25	25	
Czech Republic	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	172	176	187	187	187	292	324	331	376	376		
Denmark	na	na	na	na	na	300	361	347	369	321	319	300	233	153	175	180	200	167	272	240	230	232	244	237	255	278	365	429	429	484	503	510	484	
Estonia	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	39	39	39	39	39	39	51	59	60	60	
Finland	na	na	na	na	na	180	243	237	223	240	162	171	141	136	136	131	129	153	266	150	173	164	150	139	173	186	160	168	227	280	501	472	552	
France	na	na	na	na	na	13540	13368	13252	12813	13522	14677	13965	13017	12699	11157	11145	11453	11641	13640	13516	13769	14544	14729	15639	15510	16050	16814	16996	17956	17724	18279	20142	21710	
Germany	na	na	na	na	na	5500	5545	5963	6080	5786	5760	5465	5065	4630	4415	4481	4812	4962	5436	6112	6168	6481	6893	7269	7317	7938	8149	8871	9577	10238	10277	10652	11558	
Greece	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Hungary	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	97	97	97	97	97	130	130	130	160	160		
Ireland	na	na	na	na	na	45	62	71	62	45	47	51	48	48	45	42	42	42	32	26	46	47	47	61	61	80	82	64	66	66	97	132		
Italy	na	na	na	na	na	5120	5469	5741	5837	5770	5618	5413	5100	4770	3814	3738	3963	3985	4560	4539	4584	4529	4520	4608	5019	4963	5140	5120	5384	5411	5928	6582	7204	
Latvia	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	41	62	78	95	102	
Lithuania	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	99	99	109	154	164	
Luxembourg	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	31	31	31	26	26	35	37	43	69	78	86	92	158	459	466	
Netherlands	na	na	na	na	na	730	689	671	502	412	402	361	511	543	505	559	491	460	906	828	953	874	771	1028	968	965	1155	1166	1240	1284	1368	1404	1521	
Norway	na	na	na	na	na	400	434	399	353	305	397	360	155	312	247	223	205	254	276	293	297	315	393	421	386	428	478	499	555	592	602	637	626	
Poland	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	40	98	193	315	360	397	495	509	611	697	
Portugal	na	na	na	na	na	na	na	na	20	22	37	39	24	80	55	73	53	109	118	118	131	126	129	168	173	175	161	165	239	254	305	330	363	
Romania	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	41	83	107	116	129	
Slovakia	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	31	31	72	123	65	
Slovenia	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Spain	na	na	na	na	na	1580	1515	1495	1418	1340	1469	1449	1971	2022	1896	1901	1915	2095	2410	2626	2663	2617	2656	3142	3226	3431	3652	3930	3815	4195	4510	4650	5299	
Sweden	na	na	na	na	na	785	828	801	766	710	724	668	693	679	699	686	689	641	674	772	776	777	778	781	852	900	995	1063	1009	1005	1085	922	977	
Switzerland	na	na	na	na	na	650	553	513	480	462	476	455	705	683	670	671	707	743	849	796	737	821	794	874	878	831	880	881	917	911	1053	1287	1354	
United Kingdom	na	na	na	na	na	4380	4512	3577	3035	2732	3139	3137	3186	3239	3287	3576	3242	3437	3747	3644	3757	3894	3691	3785	3731	3971	4046	4085	4545	4549	4938	5353	6354	