A Universidade do Porto no University Ranking by Academic Performance URAP - World Ranking 2017-2018

Reitoria da Universidade do Porto

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A Universidade do Porto no University Ranking by Academic Performance URAP - World Ranking 2017-2018

http://www.urapcenter.org/2017/

1. Metodologia do URAP – World Ranking 2017-2018 e participação da U.Porto

O URAP World Ranking é elaborado pelo *Informatics Institute* da *Middle East Technical University*, Turquia.

O *Informatics Institute* da *Middle East Technical University* não solicita informações às Universidades.

Na edição de 2017-2018 o URAP World Ranking alterou a metodologia relativamente aos indicadores "Article" e "Citation", nos quais passaram a ser considerados apenas os artigos publicados em revistas dos primeiro, segundo e terceiro quartis do Journal Citation Report, sendo ainda excluídos os artigos com mais de 1000 autores.

Nos indicadores "Article Impact Total" e "Citation Impact Total" é feita referência a 23 áreas, no entanto a fórmula explicativa mantém, presume-se que por lapso, a referência às 41 áreas usadas no ano passado.

Na presente edição são incluídos erradamente como IES o Laboratório Nacional de Engenharia Civil e a Universidade Técnica de Lisboa na listagem das IES portuguesas. Na edição de 2016-2017 constava o Instituto Superior Técnico. Por razões de histórico, na Web of Science e InCites não foi eliminada a UTL da lista de Organization-Enhanced (OG), mas a pedido da Universidade de Lisboa (pós-fusão) não há produção da ex-UTL que não seja contabilizada na OG=UL. Consequentemente, podemos excluir da leitura de Portugal a UTL, uma vez que já está incluída na UL.

"**Introduction**

University Ranking by Academic Performance (URAP) Research Laboratory was established as a non-profit organization at the Informatics Institute of Middle East Technical University in 2009. URAP team members are METU researchers who voluntarily participate in URAP Research Lab as public service. The main objective of URAP is to develop a ranking system for the world universities based on academic performance indicators that reflect the quality and the quantity of their scholarly publications. In line with this objective URAP has been annually releasing the World Ranking of Higher Education Institutions since 2010, and Field Rankings since 2011. The most recent rankings include 2500 HEIs around the World as well as 41 different specialized subject areas."[1]

"**Aim and Scope**

The URAP ranking system's focus is on academic quality. URAP has gathered data about 3,000 Higher Education Institutes (HEI) in an effort to rank these organizations by their academic performance. The overall score of each HEI is based upon its performance over several indicators which are described in the Ranking Indicators section. The ranking includes HEIs except for governmental academic institutions, e.g. the Chinese Academy of Science and the Russian Academy of Science, etc. Data for 3,000 HEIs have been processed and top 2,500 of them are scored. Thus, URAP covers approximately 12% of all HEIs in the world, which makes it one of the most comprehensive university ranking systems in the world. URAP ranking system is completely based on objective data obtained from reliable open sources. The system ranks the universities according to multiple criteria. Most of the currently available ranking systems are both size and subject dependent. The AIT and CIT indicators aim to minimize the influence of differences among publication trends across disciplines by providing subject level adjustment. As of 2017, URAP employed a

[1] http://www.urapcenter.org/2017/index.php acedido a 2 de novembro de 2017.

new filter for the article and citation indicators. The URAP research team is continuously working on new methods to improve the existing indicators. The goal of the URAP ranking system is not to label world universities as best or worst. Our intention is to help universities identify potential areas of progress with respect to specific academic performance indicators. Similar to other ranking systems, the URAP system is neither exhaustive nor definitive, and is open to new ideas and improvements. The current ranking system will be continuously upgraded based on our ongoing research and the constructive feedback of our colleagues."[2]

"World Ranking Indicators

URAP 2017-2018 World Ranking is based on 6 academic performance indicators. Since URAP is an academic performance based ranking, publications constitute the basis of the ranking methodology. Both quality and quantity of publications and international research collaboration performance are used as indicators. The indicators, the data sources, and the duration of coverage are summarized in the table below.

Indicator	Objective	Coverage	Source
Article	Current Scientific Productivity	2016	InCites
Citation	Research Impact	2012-2016	InCites
Total Document	Scientific Productivity	2012-2016	InCites
Article Impact Total	Research Quality	2012-2016	InCites
Citation Impact Total	Research Quality	2012-2016	InCites
International Collaboration	International Acceptance	2012-2016	InCites

A detailed description of each indicator is provided below:

Article: is a measure of current scientific productivity which includes articles published in journals that are listed within the first, second and third quartiles in terms of their Journal Impact Factor. Articles that include more than 1000 authors are excluded. The weight of this indicator on the overall ranking is %21.

Citation: is a measure of research impact and scored according to the total number of citations received in 2012-2016 for the articles published in 2012-2016 in journals that are listed within the first, second and third quartiles in terms of their Journal Impact Factor. Articles that include more than 1000 authors are excluded. The effect of citation on the overall ranking is %21.

Total Document: is the measure of sustainability and continuity of scientific productivity and presented by the total document count which covers all scholarly output of the institutions, including conference papers, reviews, letters, discussions, scripts in addition to journal articles published during 2012-2016 period. The total document counts are not subjected to any filtering. The weight of this indicator is %10.

Article Impact Total (AIT): is a measure of scientific productivity corrected by the institution's normalized CPP(1) with respect to the world CPP in 23 subject areas between 2012 and 2016. The ratio of the institution's CPP and the world CPP indicates whether the institution is performing above or below the world

[2] http://www.urapcenter.org/2017/methodology.php?q=2 acedido a 2 de novembro de 2017.

average in that field. This ratio is multiplied by the number of publications in that field and then summed across the 23 fields, which is summarized in the following formula:

$$AIT = \sum_{i=1}^{41} \left(\frac{CPP_i}{CPP_{world}} \right) * Articles_i$$

This indicator aims to balance the institution's scientific productivity with the field normalized impact generated by those publications in each field. The weight of this indicator is %18.

Citation Impact Total (CIT) is a measure of research impact corrected by the institution's normalized CPP with respect to the world CPP in 23 subject areas between 2012 and 2016. The ratio of the institution's CPP and the world CPP indicates whether the institution is performing above or below the world average in that field. This ratio is multiplied by the number of citations in that field and then summed across the 23 fields. This indicator aims to balance the institution's scientific impact with the field normalized impact generated by the publications in each field, which is summarized in the following formula:

$$CIT = \sum_{i=1}^{41} \left(\frac{CPP_i}{CPP_{world}} \right) * Citations_i$$

The contribution of this indicator to the overall ranking is %15.

International Collaboration is a measure of global acceptance of a university. International collaboration data, which is based on the total number of articles published in collaboration with foreign universities, is obtained from InCites for the years 2012-2016. The weight of this indicator is %15 in the overall ranking."[3]

"Data Collection & Scoring

Data is gathered from Web of Science and InCites which provide lists of HEIs. 3000 HEIs with highest number of publications were initially considered, and 2500 of them were ranked after data processing. Reliability of ranking depends mostly on the quality of the data used. In order to provide reliable data, pre-processing and data cleaning techniques were employed. Statistical analysis indicated that the raw bibliometric data underlying our indicators had highly skewed distributions. Therefore, the indicator values above and below the median are linearly scored in two groups. The Delphi system was conducted with a group of experts to assign weighting scores to the indicators. Total score of 600 is distributed to each indicator as follows: Article: % 21 Total Document: % 10 Citation: %21 Article Impact Total: %18 Citation Impact Total: %15 International Collaboration: %15"[4]

[3] http://www.urapcenter.org/2017/methodology.php?q=3 acedido a 2 de novembro de 2017.
[4] http://www.urapcenter.org/2017/methodology.php?q=4 acedido a 2 de novembro de 2017.

2. Evolução das posições da U.Porto no URAP – World Ranking

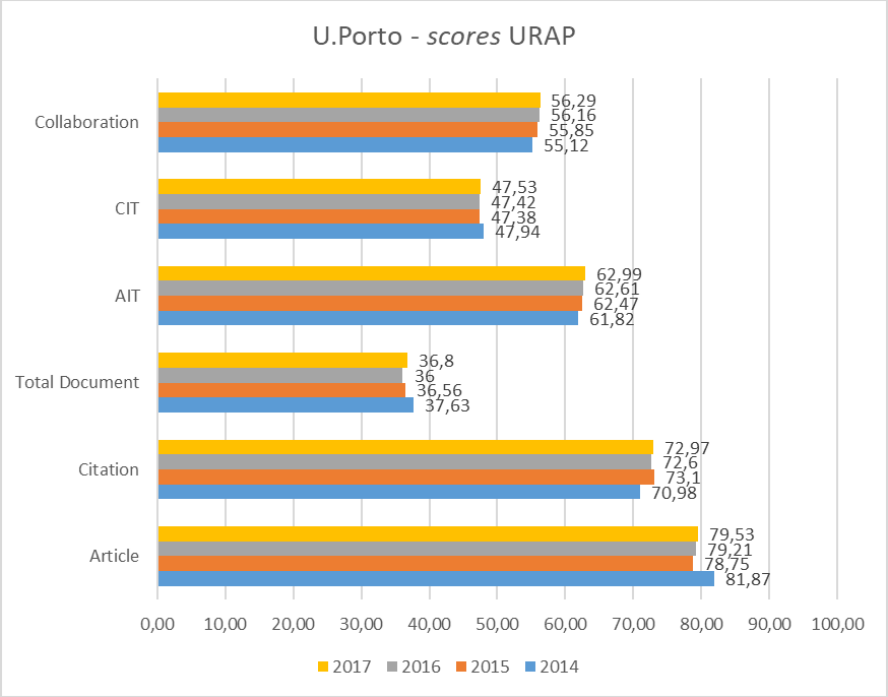
Universidade do Porto: evolução[5]

	2010	2011	2012	2013	2014	2015	2016	2017
Ranking Mundial	259 Score: 325.89	229 Score: 327.95	218 Score: 328.22	219 Score: 348.32	189 Score: 355.36	183 Score: 354.11	187 Score: 353.99	178 Score: 356.11
Ranking Europeu	109	94	93	94	84	82	83	78
Ranking Ibero-americano	10	8	8	8	6	6	6	6
Ranking Nacional	1	1	1	1	2	2	2	2

Universidade do Porto: *scores* 2014 a 2017

	2014	2015	2016	2017
Article	81,87	78,75	79,21	79,53
Citation	70,98	73,10	72,60	72,97
Total Document	37,63	36,56	36,00	36,80
AIT	61,82	62,47	62,61	62,99
CIT	47,94	47,38	47,42	47,53
Collaboration	55,12	55,85	56,16	56,29
Total	**355,36**	**354,11**	**353,99**	**356,11**

Gráfico 1: *Scores* da U.Porto no URAP World Ranking



[5] Dados de 2010 a 2013 retirados de "Evolução das posições da Universidade do Porto nos rankings universitários", jan de 2014, *in* https://sigarra.up.pt/up/pt/conteudos_service.conteudos_cont?pct_id=20113&pv_cod=55GoHdmanvIq; dados de 2014, 2015, 2016 e 2017 retirados respetivamente em 12 novembro de 2014 de http://www.urapcenter.org/2014/; em 21 de dezembro de 2015 de http://www.urapcenter.org/2015/; em 17 de outubro de 2016 de http://www.urapcenter.org/2016/ e em 2 de novembro de 2017 de http://www.urapcenter.org/2017/.

3. Posição das Universidades portuguesas no URAP – World Ranking

Universidades portuguesas no URAP – World Ranking 2017-2018

	World Ranking			Europa			Ibero-américa			Portugal		
	2015	**2016**	**2017**	**2015**	**2016**	**2017**	**2015**	**2016**	**2017**	**2015**	**2016**	**2017**
Universidade de Lisboa	121	116	117	51	44	46	4	3	3	1	1	1
Universidade do Porto	183	187	178	82	83	78	6	6	6	2	2	2
Universidade Tecnica de Lisboa**	n/c	n/c	291	n/c	n/c	127	n/c	n/c	15	n/c	n/c	3
Universidade de Coimbra	304	318	299	134	140	131	16	16	16	3	3	4
Universidade de Aveiro	397	381	384	175	164	168	26	25	26	4	5	5
Universidade Nova de Lisboa	420	427	423	181	187	186	30	30	30	5	6	6
Universidade do Minho	428	440	430	185	192	190	31	33	32	6	7	7
Universidade do Algarve	898	918	951	377	388	398	74	78	81	7	8	8
Universidade de Trás-os-Montes e Alto Douro	1025	990	1040	423	415	431	87	84	88	8	9	9
Universidade da Beira Interior	1096	1033	1065	452	435	445	93	88	90	9	10	10
Universidade de Évora	1105	1133	1099	456	469	459	94	103	93	10	11	11
Instituto Politécnico do Porto	1792	1780	1222	665	660	493	152	159	109	16	18	12
ISCTE Instituto Universitário de Lisboa	1640	1559	1521	617	588	585	140	137	134	14	13	13
Instituto Politécnico de Bragança	1749	1757	1526	654	649	587	148	157	137	15	17	14
Universidade dos Açores	n/c	1479	1607	n/c	564	613	n/c	130	145	n/c	12	15
Universidade da Madeira	1560	1624	1738	593	605	640	131	144	153	12	15	16
Instituto Politécnico de Lisboa	1523	1644	1760	580	614	645	128	145	156	11	16	17
Universidade Católica Portuguesa	1591	1621	1831	600	603	669	136	143	164	13	14	18
Instituto Superior Psicologia Aplicada (ISPA)	1945	n/c	2178	709	n/c	756	162	n/c	199	17	n/c	19
Instituto Superior de Ciencias da Saude Egas Moniz	n/c	n/c	2230	n/c	n/c	767	n/c	n/c	202	n/c	n/c	20
Universidade Fernando Pessoa	n/c	n/c	2291	n/c	n/c	777	n/c	n/c	208	n/c	n/c	21
National Civil Engineering Laboratory	n/c	n/c	2388	n/c	n/c	807	n/c	n/c	217	n/c	n/c	22
Nº IES	1998	2000	2500	730	716	836	166	179	234	17	18*	22

n/c - não consta.
*Na edição de 2016-2017, o Instituto Superior Técnico constava na posição 326 do mundo.
** Podemos excluir da leitura de Portugal a UTL uma vez que já está incluída na UL.

Scores das Universidades portuguesas no URAP – World Ranking 2017-2018

World Ranking				Article			Citation			Total Document			AIT			CIT			Collaboration			Total		
2015	2016	2017		2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016*	2017
121	116	117	Universidade de Lisboa	83,91	84,96	84,48	76,43	75,09	75,87	37,88	37,75	39,24	65,00	67,52	68,40	48,24	48,99	49,34	61,06	60,59	60,91	372,52	374,89	378,24
183	187	178	Universidade do Porto	78,75	79,21	79,53	73,10	72,60	72,97	36,56	36,00	36,80	62,47	62,61	62,99	47,38	47,42	47,53	55,85	56,16	56,29	354,11	353,99	356,11
n/c	n/c	291	Universidade Tecnica de Lisboa**	n/c	n/c	71,99	n/c	n/c	69,07	n/c	n/c	33,91	n/c	n/c	60,66	n/c	n/c	46,84	n/c	n/c	52,63	n/c	n/c	335,09
304	318	299	Universidade de Coimbra	70,80	71,32	71,54	69,30	67,93	68,64	33,77	33,28	34,46	59,06	60,12	61,06	47,12	47,39	47,70	51,29	50,80	51,31	331,34	330,84	334,71
397	381	384	Universidade de Aveiro	69,63	70,25	70,55	67,17	67,21	67,43	32,47	32,32	32,72	58,01	58,30	58,44	46,02	46,13	46,19	50,07	50,51	50,67	323,37	324,71	326,00
420	427	423	Universidade Nova de Lisboa	68,70	68,88	68,79	66,73	66,23	66,41	32,24	32,06	32,55	57,50	58,16	58,76	46,15	46,48	46,81	49,54	49,41	49,50	320,85	321,21	322,82
428	440	430	Universidade do Minho	67,94	68,25	68,53	66,93	65,90	66,05	32,17	31,78	32,57	57,48	58,56	58,83	46,55	47,06	47,15	49,31	48,88	48,99	320,38	320,43	322,11
898	918	951	Universidade do Algarve	63,29	63,62	63,90	63,22	63,43	63,49	30,05	30,21	30,22	54,34	54,47	54,60	45,04	45,09	45,13	46,14	46,31	46,35	302,09	303,13	303,68
1025	990	1040	Universidade de Trás-os-Montes e Alto Douro	63,18	63,36	63,44	58,54	63,24	63,31	30,01	30,13	30,19	54,02	54,24	54,36	35,86	45,04	45,08	45,50	45,54	45,59	287,12	301,56	301,97
1096	1033	1065	Universidade da Beira Interior	61,81	63,06	63,50	57,00	63,00	63,21	27,97	30,04	30,20	48,64	54,03	54,22	36,33	42,64	45,06	41,80	45,08	45,26	273,55	297,85	301,46
1105	1133	1099	Universidade de Évora	44,92	51,18	63,37	61,17	63,18	63,18	21,72	25,72	28,66	54,02	54,13	54,19	45,03	45,06	45,08	45,36	45,43	45,56	272,23	284,70	300,04
1792	1780	1222	Instituto Politécnico do Porto	16,90	20,18	50,06	18,63	26,15	63,06	8,96	8,01	30,10	14,03	24,73	54,10	13,47	24,64	45,05	13,63	14,60	42,42	85,63	118,32	284,79
1640	1559	1521	ISCTE Instituto Universitário de Lisboa	28,23	45,27	47,50	18,75	26,04	31,53	14,22	15,99	22,96	16,91	29,34	39,81	8,83	15,38	23,68	29,51	40,89	45,05	116,44	172,92	210,52
1749	1757	1526	Instituto Politécnico de Bragança	10,94	18,71	36,41	23,59	29,59	46,74	8,29	8,64	16,89	16,66	21,13	34,65	14,34	20,72	30,54	20,84	24,54	43,89	94,65	123,33	209,12
n/c	1479	1607	Universidade dos Açores	n/c	26,58	25,60	n/c	40,28	37,86	n/c	14,24	11,60	n/c	34,65	36,42	n/c	32,19	34,17	n/c	45,10	45,11	n/c	193,04	190,76
1560	1624	1738	Universidade da Madeira	4,78	7,39	9,39	35,15	40,62	36,40	6,32	7,27	6,50	25,62	29,64	27,63	40,08	45,04	45,01	22,30	25,58	27,64	134,27	155,53	152,58
1523	1644	1760	Instituto Politécnico de Lisboa	15,51	22,15	21,34	32,17	36,34	34,77	10,20	11,09	13,72	32,49	29,31	28,29	36,37	28,26	26,74	18,57	22,16	24,15	145,30	149,31	149,01
1591	1621	1831	Universidade Católica Portuguesa	17,50	25,10	14,51	29,16	38,31	34,92	10,31	13,81	11,46	28,18	29,03	26,59	25,07	26,09	24,08	18,03	23,71	24,15	128,24	156,05	135,71
1945	n/c	2178	Instituto Superior Psicologia Aplicada (ISPA)	5,97	n/c	14,80	9,16	n/c	12,33	5,71	n/c	4,95	11,03	n/c	12,82	8,81	n/c	11,32	14,70	n/c	19,19	55,38	n/c	75,40

World Ranking				Article			Citation			Total Document			AIT			CIT			Collaboration			Total		
2015	2016	2017		2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016*	2017
n/c	n/c	2230	Instituto Superior de Ciencias da Saude Egas Moniz	n/c	n/c	14,80	n/c	n/c	15,90	n/c	n/c	4,48	n/c	n/c	10,82	n/c	n/c	9,75	n/c	n/c	14,00	n/c	n/c	69,74
n/c	n/c	2291	Universidade Fernando Pessoa	n/c	n/c	0,01	n/c	n/c	17,98	n/c	n/c	4,00	n/c	n/c	12,87	n/c	n/c	13,83	n/c	n/c	12,64	n/c	n/c	61,34
n/c	n/c	2388	National Civil Engineering Laboratory	n/c	n/c	7,12	n/c	n/c	10,65	n/c	n/c	4,31	n/c	n/c	10,89	n/c	n/c	6,97	n/c	n/c	8,70	n/c	n/c	48,63

n/c – não consta
* Na edição de 2016-2017, o Instituto Superior Técnico constava na listagem das IES portuguesas.
** Podemos excluir da leitura de Portugal a UTL uma vez que já está incluída na UL.

Gráfico 2: *Total scores* das universidades portuguesas no URAP World Ranking

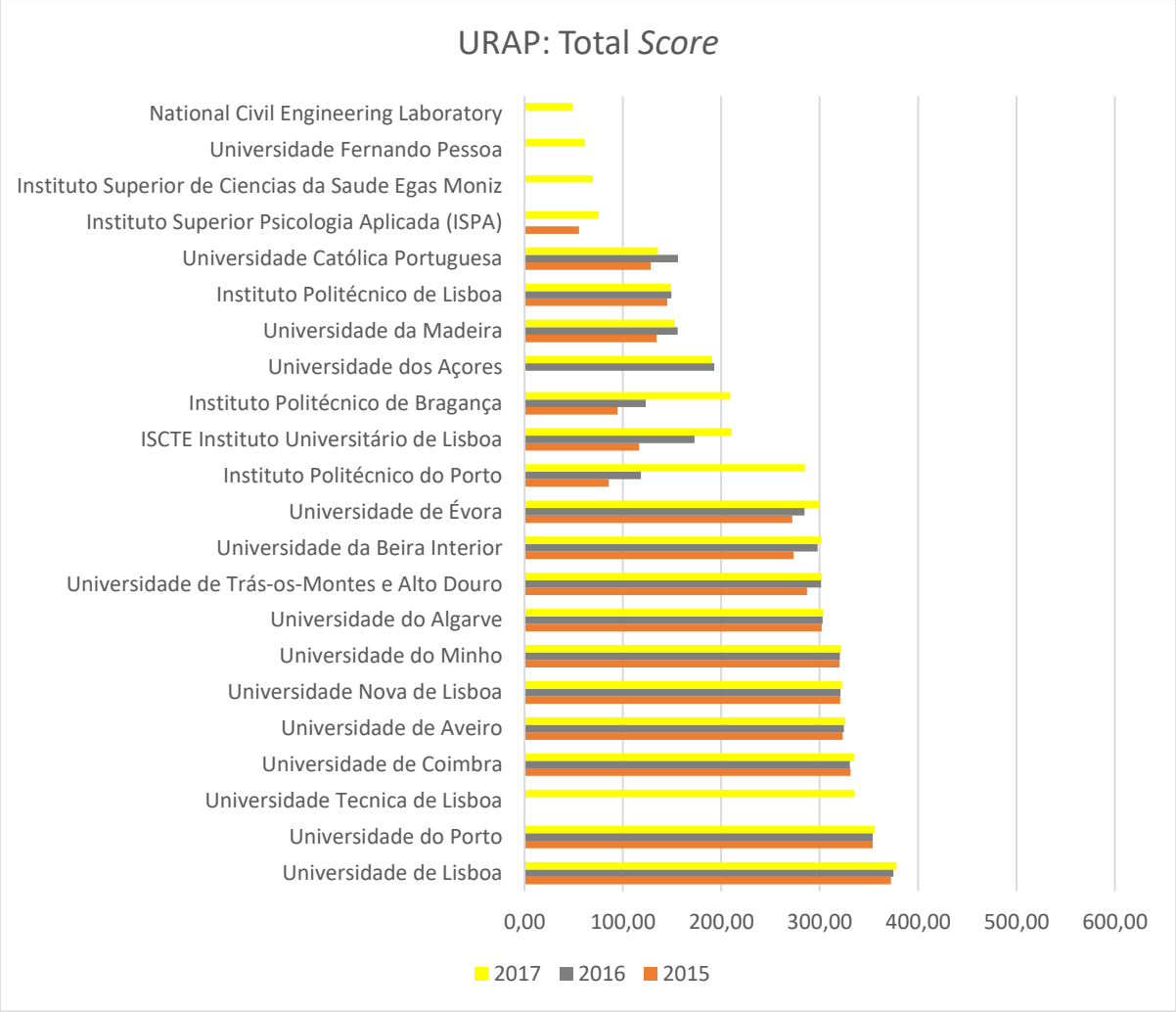


Gráfico 3: S*cores* do indicador "*Article*" das universidades portuguesas no URAP World Ranking

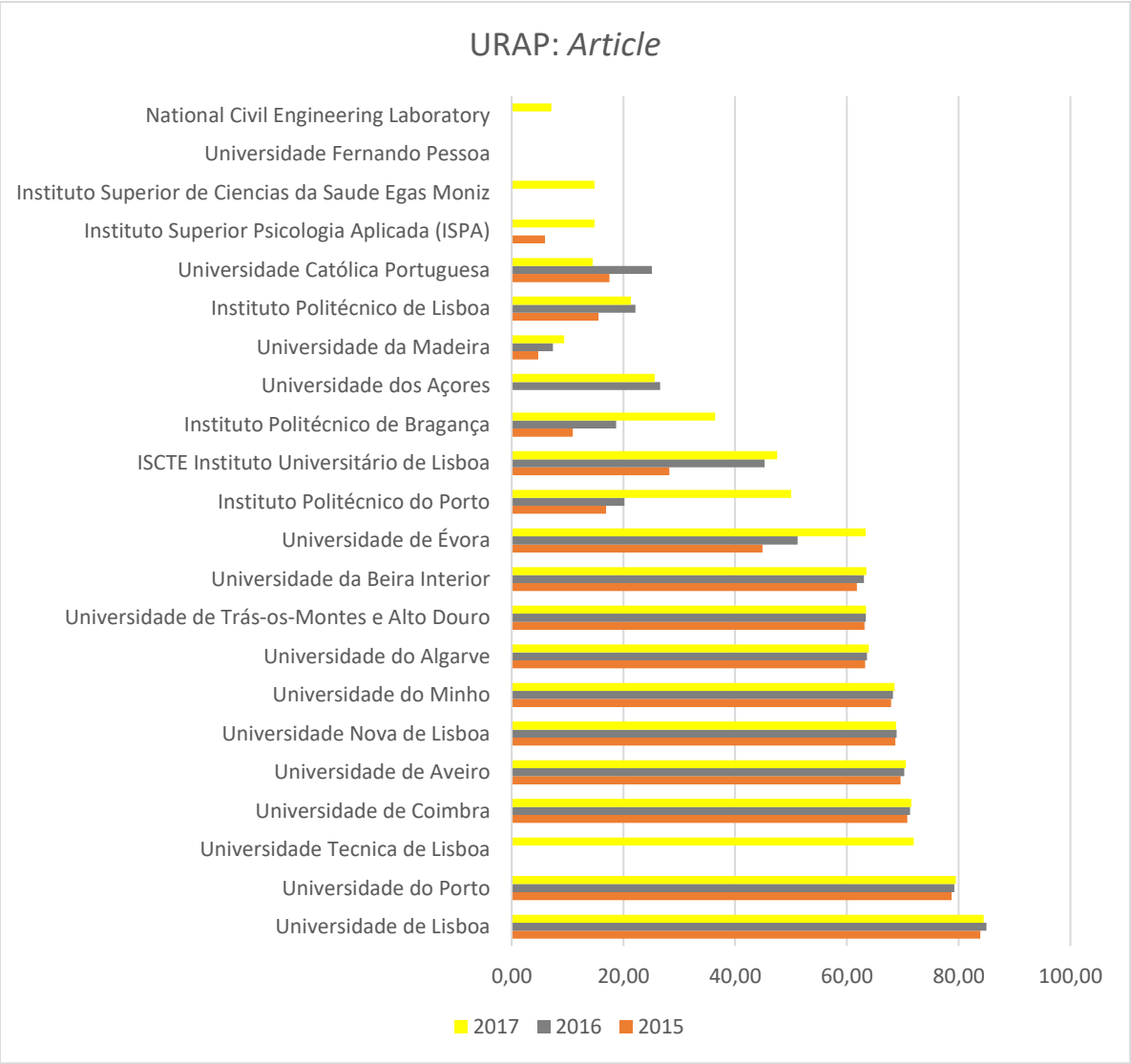


Gráfico 4: *Scores* do indicador "*Citation*" das universidades portuguesas no URAP World Ranking

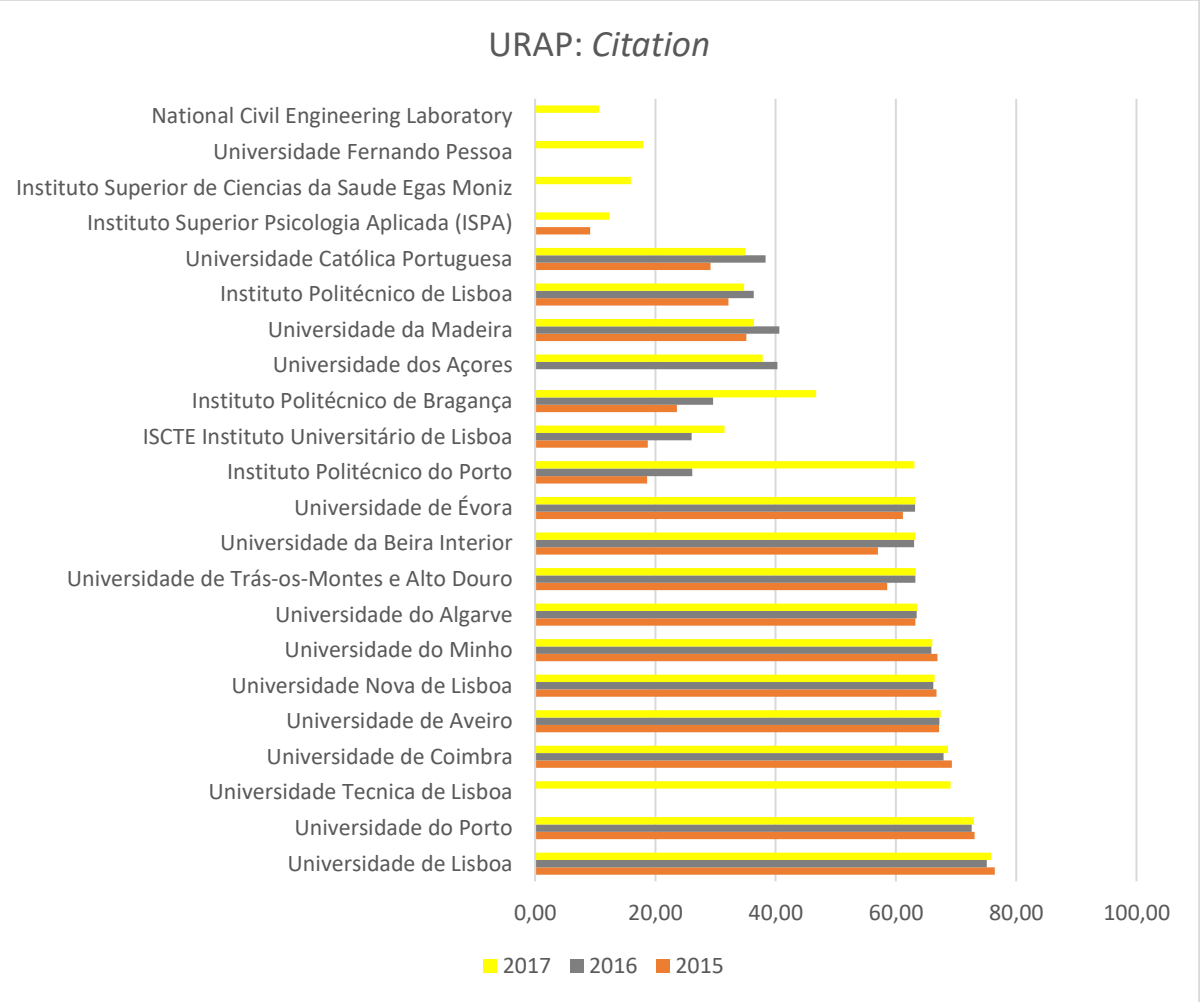


Gráfico 5: *Scores* do indicador "*Total Document*" das universidades portuguesas no URAP World Ranking

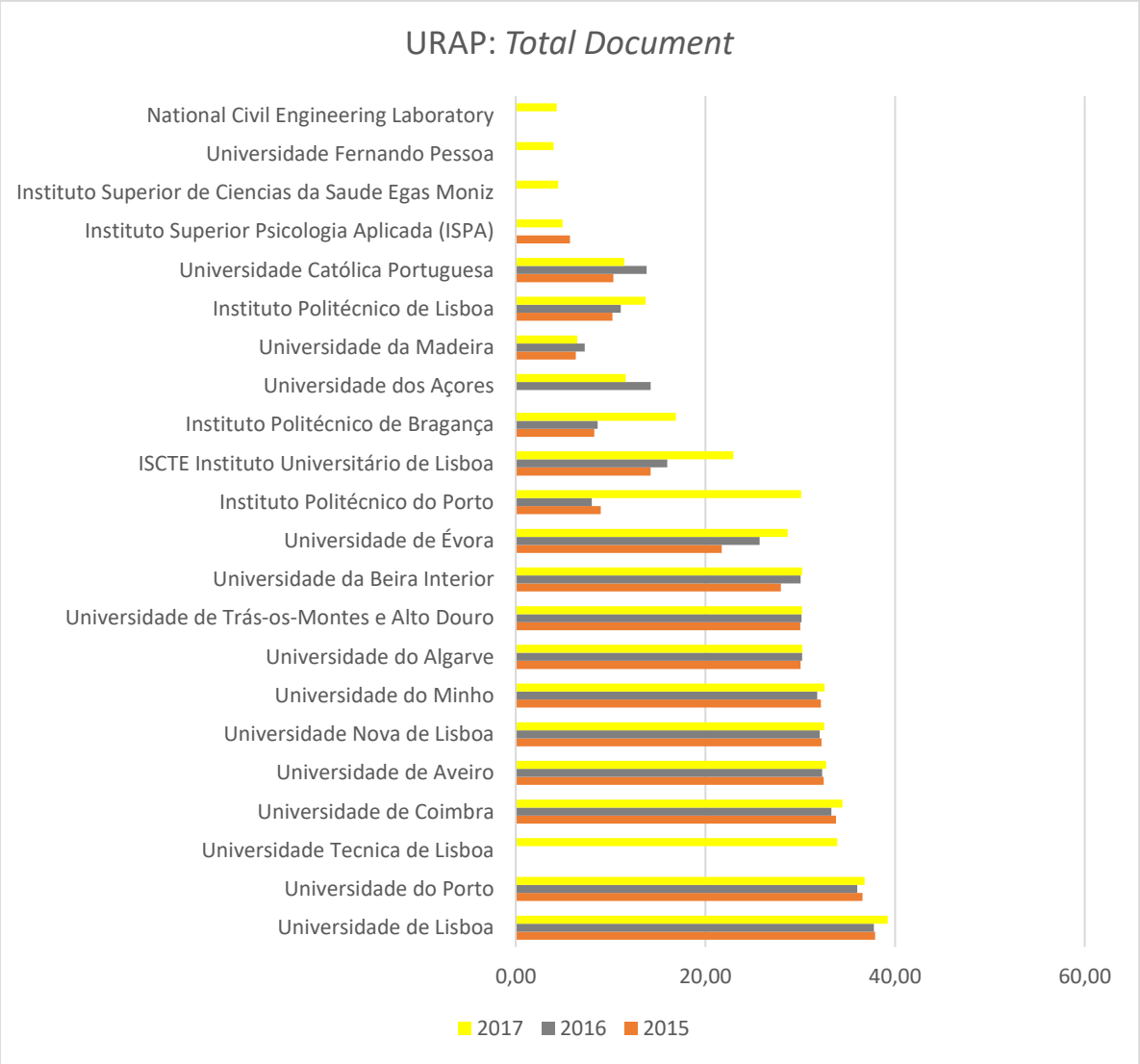


Gráfico 6: *Scores* do indicador "AIT" das universidades portuguesas no URAP World Ranking

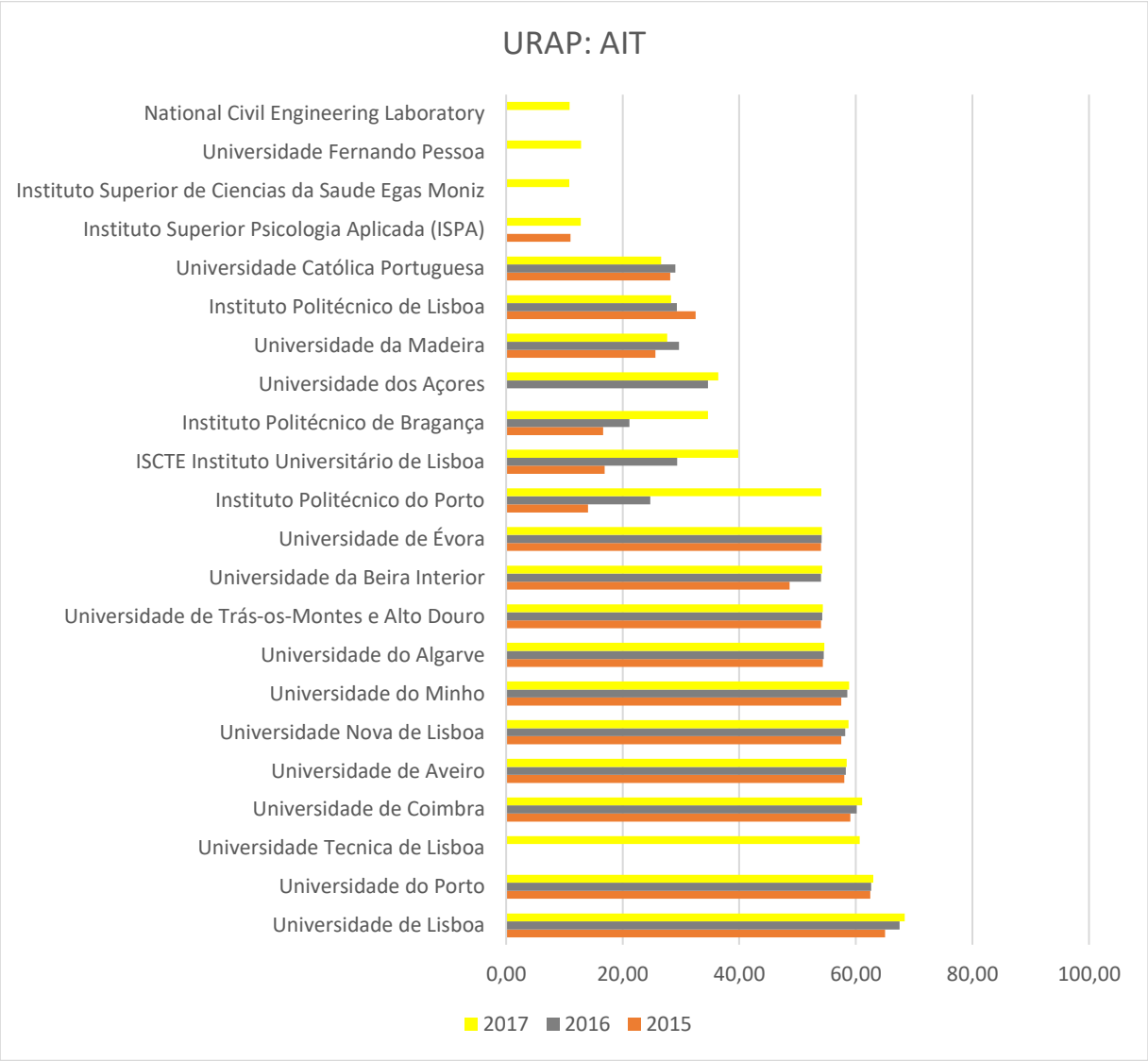


Gráfico 7: *Scores* do indicador "CIT" das universidades portuguesas no URAP World Ranking

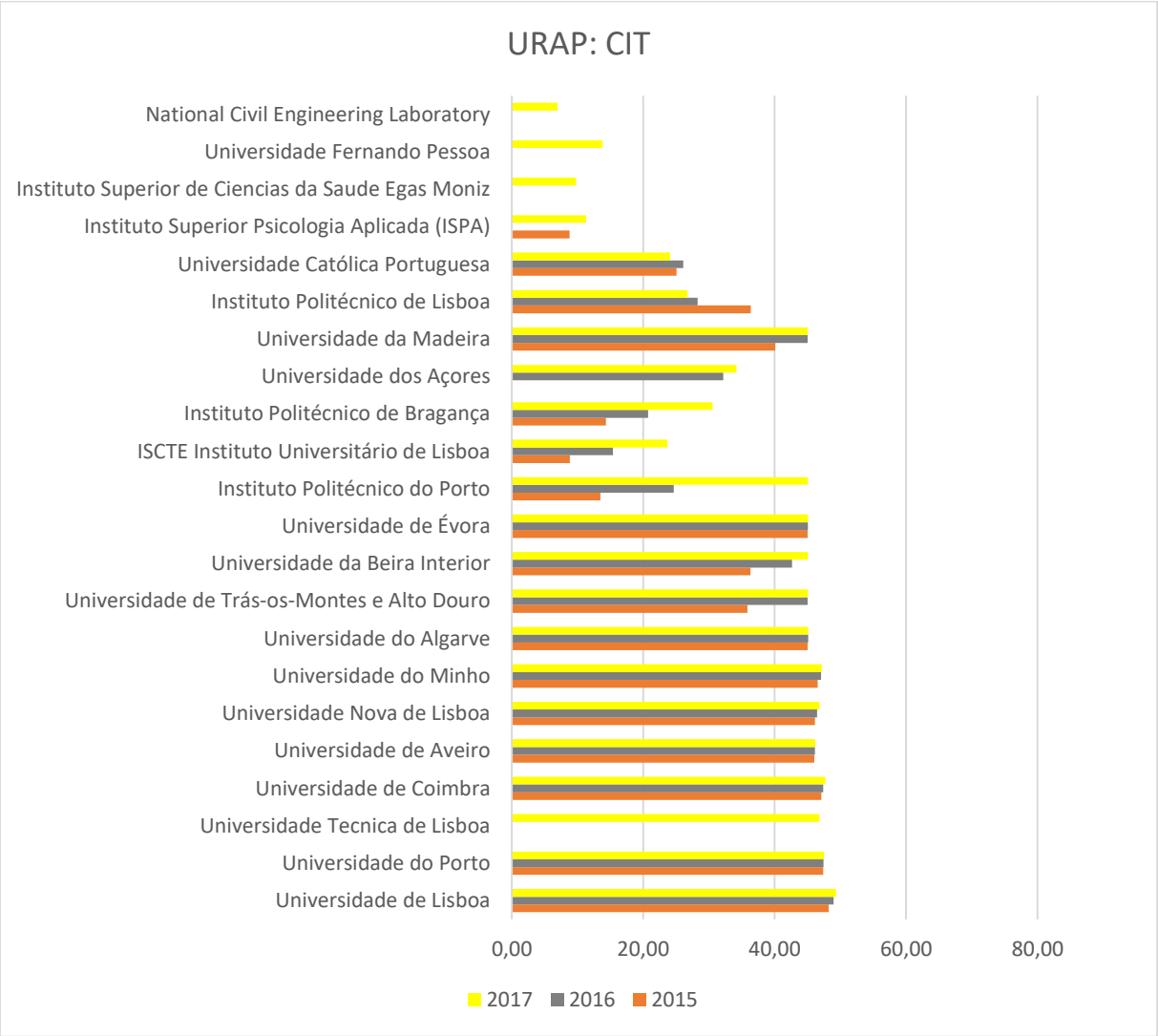
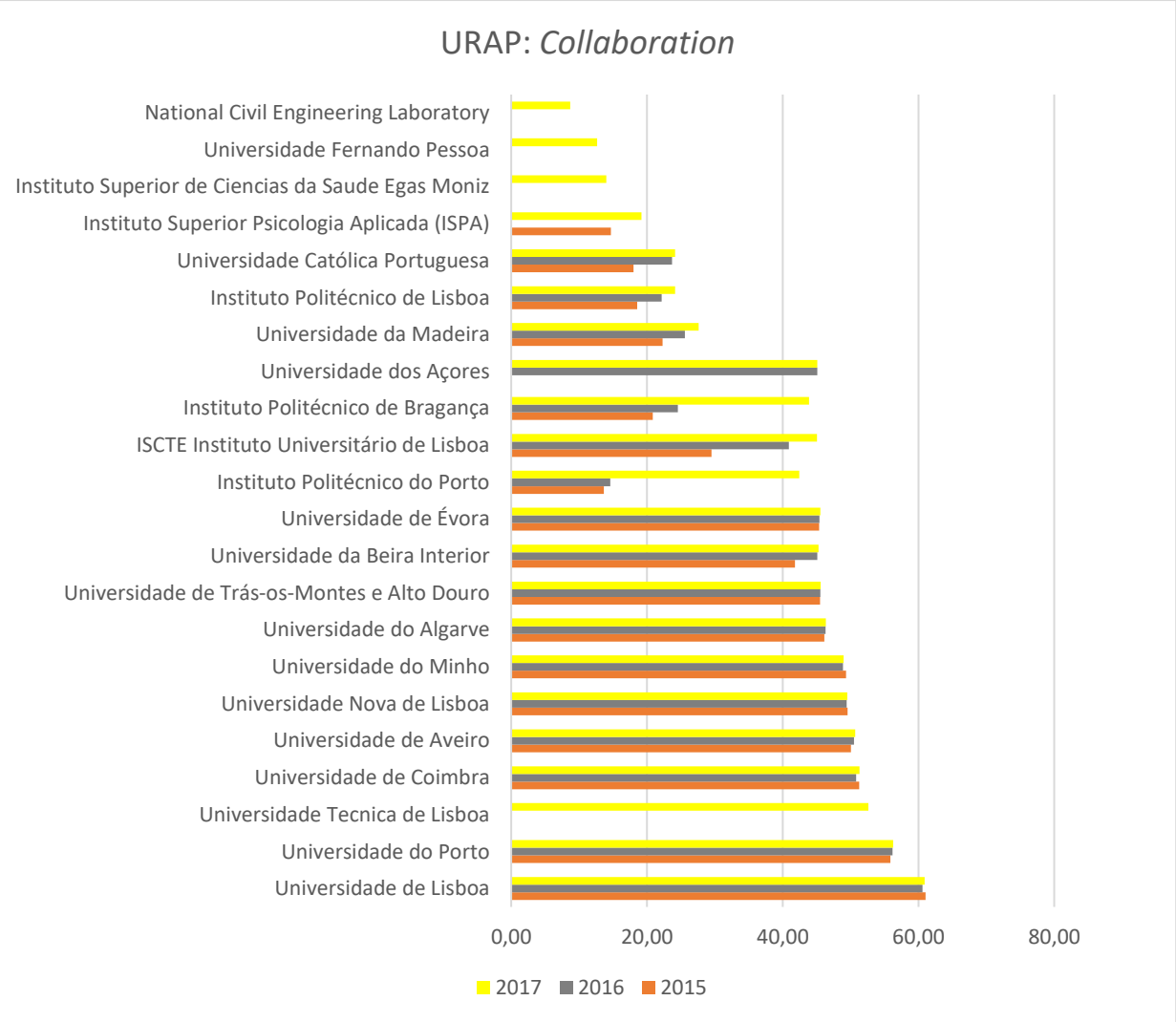



Gráfico 8: *Scores* do indicador "*Collaboration*" das universidades portuguesas no URAP World Ranking