

# Socio-technical analysis result ( APR )

	range.date			devs	ml.only.devs	code.only.devs	ml.code.devs	perc.ml.only.devs	perc.code.only.devs	perc.ml.code.devs	sponsored.devs	ratio.sponsored	sponsored.core.devs	ratio.sponsored.core	num.tz	core.global.devs	core.mail.devs	core.code.devs	org.silo	prima.donnas	radio.silence	black.cloud	missing.links	st.congruence	communicability	global.turnover	code.turnover
1	2013-05 – 2013-08	24	18	1	5	0.7500	0.0417	0.2083	4	0.1667	0	0	1	12	12	0	0	0	0	2	0	0	1.0000	1.0000	0.0000	0.0000	
2	2013-08 – 2013-11	33	25	2	6	0.7576	0.0606	0.1818	3	0.0909	0	0	1	14	14	1	0	0	8	0	0	1.0000	1.0000	0.2456	0.2857		
3	2013-11 – 2014-02	20	13	3	4	0.6500	0.1500	0.2000	1	0.0500	0	0	1	9	9	2	0	0	5	0	0	1.0000	1.0000	0.7547	0.4000		
4	2014-02 – 2014-05	20	14	1	5	0.7000	0.0500	0.2500	3	0.1500	0	0	1	11	11	0	0	0	0	0	0	0	1.0000	1.0000	0.4000	0.4615	
5	2014-05 – 2014-08	15	9	1	5	0.6000	0.0667	0.3333	2	0.1333	0	0	1	7	8	2	0	0	5	0	2	0.3333	0.7222	0.7429	0.6667		
6	2014-08 – 2014-10	21	15	3	3	0.7143	0.1429	0.1429	1	0.0476	0	0	1	10	10	0	0	0	0	0	0	0	1.0000	1.0000	0.3333	0.5000	
7	2014-10 – 2015-01	6	3	3	0	0.5000	0.5000	0.0000	2	0.3333	0	0	1	2	2	0	0	0	3	0	0	1.0000	1.0000	1.3333	0.8889		
8	2015-01 – 2015-04	22	13	3	6	0.5909	0.1364	0.2727	1	0.0455	0	0	1	8	8	3	1	2	15	0	1	0.6667	0.9259	0.1429	0.3333		
9	2015-04 – 2015-08	21	14	4	3	0.6667	0.1905	0.1429	1	0.0476	0	0	1	9	9	0	0	0	0	0	0	0	1.0000	1.0000	0.4651	0.6250	
10	2015-08 – 2015-10	23	18	2	3	0.7826	0.0870	0.1304	2	0.0870	0	0	1	10	10	0	0	0	4	0	0	0	1.0000	1.0000	0.5000	0.6667	
11	2015-10 – 2016-02	26	22	1	3	0.8462	0.0385	0.1154	1	0.0385	0	0	1	14	14	1	1	0	5	0	1	0.0000	0.5000	0.4898	0.6667		
12	2016-02 – 2016-05	14	7	4	3	0.5000	0.2857	0.2143	3	0.2143	0	0	1	6	6	0	0	0	0	0	0	0	1.0000	1.0000	0.8500	0.1818	
	core.global.turnover	core.mail.turnover	core.code.turnover	ratio.smelly.quitters	ratio.smelly.devs	global.truck	mail.truck	code.truck	closeness.centr	betweenness.centr	degree.centr	global.mod	mail.mod	code.mod	density	mail.only.core.devs	code.only.core.devs	ml.code.core.devs	ratio.mail.only.core	ratio.code.only.core	ratio.ml.code.core						
1	0.0000	0.0000	0	0.0000	0.0833	0.5000	0.4783	1.0000	0.2122	0.2848	0.4384	0.2937	0.2937	0.0000	0.2572	12	0	0	1.0000	0	0.0000						
2	0.3077	0.3077	0	0.0000	0.2424	0.5758	0.5484	0.8750	0.0797	0.2717	0.5379	0.0529	0.0539	-0.5000	0.2121	13	0	1	0.9286	0	0.0714						
3	0.6087	0.6087	0	0.1500	0.2500	0.5500	0.4706	0.7143	0.1140	0.3611	0.4737	0.2130	0.2426	-0.4767	0.2105	7	0	2	0.7778	0	0.2222						
4	0.3000	0.3000	2	0.2500	0.0000	0.4500	0.4211	1.0000	0.2735	0.4017	0.5842	0.1987	0.1987	0.0000	0.2579	11	0	0	1.0000	0	0.0000						
5	0.7778	0.7368	0	0.0000	0.3333	0.5333	0.4286	0.6667	0.1211	0.3803	0.2762	0.2236	0.5035	-0.3887	0.1524	6	0	2	0.7500	0	0.2500						
6	0.3529	0.4444	2	0.1667	0.0000	0.5238	0.4444	1.0000	0.0956	0.2484	0.3119	0.3084	0.3084	0.0000	0.2381	10	0	0	1.0000	0	0.0000						
7	1.5000	1.5000	0	0.0000	0.5000	0.6667	0.3333	1.0000	0.1232	0.1000	0.2667	-0.3750	-0.3750	0.0000	0.1333	2	0	0	1.0000	0	0.0000						
8	0.2000	0.2000	0	1.0000	0.7273	0.6364	0.5789	0.6667	0.0944	0.3642	0.4329	0.0678	0.0267	0.0907	0.1385	5	0	3	0.6250	0	0.3750						
9	0.2353	0.2353	2	0.7000	0.0000	0.5714	0.4706	1.0000	0.0847	0.1443	0.3095	0.1235	0.1235	0.0000	0.1905	9	0	0	1.0000	0	0.0000						
10	0.3158	0.3158	0	0.0000	0.1739	0.5652	0.5238	1.0000	0.0797	0.1991	0.3617	0.0970	0.0970	0.0000	0.2292	10	0	0	1.0000	0	0.0000						
11	0.2500	0.2500	0	0.0833	0.2692	0.4615	0.4400	0.7500	0.7892	0.4555	0.6554	0.1443	0.1516	-0.5000	0.3046	13	0	1	0.9286	0	0.0714						
12	1.2000	1.2000	2	0.1176	0.0000	0.5714	0.4000	1.0000	0.0720	0.1479	0.3077	0.2257	0.2257	0.0000	0.1538	6	0	0	1.0000	0	0.0000						

Community smells: Pearson's correlation ( APR )

	devs	ml.only.devs	code.only.devs	ml.code.devs	perc.ml.only.devs	perc.code.only.devs	perc.ml.code.devs	sponsored.devs	ratio.sponsored	sponsored.core.devs	ratio.sponsored.core	num.tz	core.global.devs	core.mail.devs	core.code.devs	org.silo	prima.donnas	radio.silence	black.cloud	missing.links	st.congruence	communicability	global.turnover	code.turnover
org.silo	0.25	0.25	-0.13	0.18	0.20	-0.20	0.06	-0.45	-0.39	-	-	-	0.23	0.22	0.55	-	0.67	0.65	-	0.48	-0.70	-0.64	-0.37	-0.04
prima.donnas	0.07	-0.06	0.18	0.40	-0.23	-0.02	0.33	-0.30	-0.25	-	-	-	-0.12	-0.13	0.67	0.67	-	0.80	-	0.32	-0.16	-0.01	-0.42	-0.29
radio.silence	0.30	0.21	-0.08	0.49	-0.00	-0.17	0.28	-0.26	-0.31	-	-	-	0.08	0.09	0.85	0.65	0.80	-	-	0.46	-0.34	-0.22	-0.37	-0.21
black.cloud	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
missing.links	-0.08	-0.09	-0.40	0.30	-0.06	-0.29	0.53	-0.27	-0.18	-	-	-	-0.05	0.01	0.66	0.48	0.32	0.46	-	-	-0.84	-0.75	-0.07	0.19

	core.global.turnover	core.mail.turnover	core.code.turnover	ratio.smelly.quitters	ratio.smelly.devs	global.truck	mail.truck	code.truck	closeness.centr	betweenness.centr	degree.centr	global.mod	mail.mod	code.mod	density	mail.only.core.devs	code.only.core.devs	ml.code.core.devs	ratio.mail.only.core	ratio.code.only.core	ratio.ml.code.core
org.silo	-0.37	-0.38	-0.36	0.48	0.58	-0.01	0.33	-0.58	0.61	0.53	0.47	-0.07	-0.14	-0.11	0.13	0.04	-	0.55	-0.51	-	0.51
prima.donnas	-0.27	-0.27	-0.24	0.79	0.71	0.43	0.55	-0.48	-0.13	0.23	0.05	-0.11	-0.19	0.32	-0.39	-0.33	-	0.67	-0.72	-	0.72
radio.silence	-0.27	-0.29	-0.72	0.41	0.86	0.42	0.66	-0.73	-0.01	0.39	0.25	-0.23	-0.21	-0.22	-0.29	-0.17	-	0.85	-0.82	-	0.82
black.cloud	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
missing.links	-0.07	-0.10	-0.43	0.08	0.49	-0.08	0.06	-0.77	0.29	0.56	-0.01	0.10	0.38	-0.35	-0.20	-0.19	-	0.66	-0.67	-	0.67

Community smells: Pearson's correlation - p-values ( APR )

	devs	ml.only.devs	code.only.devs	ml.code.devs	perc.ml.only.devs	perc.code.only.devs	perc.ml.code.devs	sponsored.devs	ratio.sponsored	sponsored.core.devs	ratio.sponsored.core	num.tz	core.global.devs	core.mail.devs	core.code.devs	org.silo	prima.donnas	radio.silence	black.cloud	missing.links	st.congruence	communicability	global.turnover	code.turnover
org.silo	0.43	0.44	0.68	0.57	0.53	0.52	0.85	0.14	0.20	-	-	-	0.47	0.49	0.06	-	0.02	0.02	-	0.12	0.01	0.02	0.26	0.91
prima.donnas	0.82	0.84	0.57	0.19	0.47	0.95	0.29	0.34	0.43	-	-	-	0.70	0.68	0.02	0.02	-	0.00	-	0.31	0.63	0.98	0.20	0.39
radio.silence	0.34	0.51	0.79	0.11	0.99	0.59	0.38	0.42	0.33	-	-	-	0.80	0.78	0.00	0.02	0.00	-	-	0.13	0.27	0.49	0.27	0.54
black.cloud	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
missing.links	0.81	0.78	0.19	0.34	0.85	0.36	0.08	0.40	0.57	-	-	-	0.87	0.97	0.02	0.12	0.31	0.13	-	-	0.00	0.00	0.84	0.57

	core.global.turnover	core.mail.turnover	core.code.turnover	ratio.smelly.quitters	ratio.smelly.devs	global.truck	mail.truck	code.truck	closeness.cent	betweenness.cent	degree.cent	global.mod	mail.mod	code.mod	density	mail.only.core.devs	code.only.core.devs	ml.code.core.devs	ratio.mail.only.core	ratio.code.only.core	ratio.ml.code.core
org.silo	0.27	0.25	0.28	0.14	0.05	0.97	0.29	0.05	0.04	0.08	0.12	0.84	0.66	0.73	0.69	0.89	-	0.06	0.09	-	0.09
prima.donnas	0.43	0.42	0.48	0.00	0.01	0.17	0.06	0.11	0.68	0.47	0.88	0.73	0.55	0.32	0.20	0.29	-	0.02	0.01	-	0.01
radio.silence	0.42	0.38	0.01	0.21	0.00	0.18	0.02	0.01	0.98	0.21	0.44	0.47	0.52	0.49	0.35	0.60	-	0.00	0.00	-	0.00
black.cloud	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
missing.links	0.85	0.77	0.19	0.81	0.10	0.80	0.85	0.00	0.37	0.06	0.97	0.75	0.23	0.27	0.53	0.56	-	0.02	0.02	-	0.02

# Community smells: Spearman's correlation ( APR )

	devs	ml.only.devs	code.only.devs	ml.code.devs	perc.ml.only.devs	perc.code.only.devs	perc.ml.code.devs	sponsored.devs	ratio.sponsored	sponsored.core.devs	ratio.sponsored.core	num.tz	core.global.devs	core.mail.devs	core.code.devs	org.silo	prima.donnas	radio.silence	black.cloud	missing.links	st.congruence	communicability	global.turnover	code.turnover
org.silo	0.39	0.16	-0.13	0.17	0.13	-0.32	0.00	-0.48	-0.65	-	-	-	0.16	0.13	0.54	-	0.67	0.53	-	0.68	-0.77	-0.77	-0.37	0.00
prima.donnas	0.13	-0.18	0.18	0.46	-0.31	0.04	0.39	-0.32	-0.39	-	-	-	-0.22	-0.26	0.54	0.67	-	0.49	-	0.46	-0.40	-0.40	-0.50	-0.30
radio.silence	0.40	0.17	-0.27	0.52	0.11	-0.29	0.12	-0.21	-0.35	-	-	-	0.12	0.10	0.87	0.53	0.49	-	-	0.58	-0.56	-0.56	-0.27	-0.10
black.cloud	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
missing.links	0.08	-0.10	-0.37	0.30	-0.06	-0.35	0.36	-0.34	-0.41	-	-	-	-0.10	-0.09	0.71	0.68	0.46	0.58	-	-	-0.98	-0.98	-0.14	0.23

	core.global.turnover	core.mail.turnover	core.code.turnover	ratio.smelly.quitters	ratio.smelly.devs	global.truck	mail.truck	code.truck	closeness.centr	betweenness.centr	degree.centr	global.mod	mail.mod	code.mod	density	mail.only.core.devs	code.only.core.devs	ml.code.core.devs	ratio.mail.only.core	ratio.code.only.core	ratio.ml.code.core
org.silo	-0.60	-0.60	-0.36	0.31	0.53	0.00	0.26	-0.54	0.26	0.52	0.39	-0.26	-0.32	0.04	0.06	0.03	-	0.54	-0.54	-	0.54
prima.donnas	-0.50	-0.50	-0.24	0.51	0.49	0.39	0.48	-0.49	-0.13	0.22	0.04	-0.31	-0.39	0.54	-0.39	-0.40	-	0.54	-0.54	-	0.54
radio.silence	-0.25	-0.25	-0.86	-0.23	0.84	0.31	0.53	-0.85	0.00	0.42	0.28	-0.49	-0.33	-0.37	-0.23	-0.02	-	0.87	-0.87	-	0.87
black.cloud	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
missing.links	-0.24	-0.24	-0.46	-0.03	0.64	-0.10	0.04	-0.78	0.30	0.63	0.01	-0.04	0.10	-0.15	-0.17	-0.17	-	0.71	-0.75	-	0.75

Community smells: Spearman's correlation - p-values ( APR )

	devs	ml.only.devs	code.only.devs	ml.code.devs	perc.ml.only.devs	perc.code.only.devs	perc.ml.code.devs	sponsored.devs	ratio.sponsored	sponsored.core.devs	ratio.sponsored.core	num.tz	core.global.devs	core.mail.devs	core.code.devs	org.silo	prima.donnas	radio.silence	black.cloud	missing.links	st.congruence	communicability	global.turnover	code.turnover
org.silo	0.21	0.61	0.68	0.60	0.69	0.30	1.00	0.12	0.02	-	-	-	0.61	0.69	0.07	-	0.02	0.08	-	0.01	0.00	0.00	0.26	1.00
prima.donnas	0.68	0.59	0.57	0.14	0.33	0.89	0.21	0.31	0.21	-	-	-	0.49	0.41	0.07	0.02	-	0.10	-	0.13	0.20	0.20	0.12	0.37
radio.silence	0.20	0.61	0.40	0.08	0.73	0.37	0.71	0.51	0.27	-	-	-	0.72	0.75	0.00	0.08	0.10	-	-	0.05	0.06	0.06	0.42	0.77
black.cloud	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
missing.links	0.81	0.76	0.23	0.34	0.85	0.26	0.26	0.28	0.19	-	-	-	0.76	0.77	0.01	0.01	0.13	0.05	-	-	0.00	0.00	0.68	0.50

	core.global.turnover	core.mail.turnover	core.code.turnover	ratio.smelly.quitters	ratio.smelly.devs	global.truck	mail.truck	code.truck	closeness.cent	betweenness.cent	degree.cent	global.mod	mail.mod	code.mod	density	mail.only.core.devs	code.only.core.devs	ml.code.core.devs	ratio.mail.only.core	ratio.code.only.core	ratio.ml.code.core
org.silo	0.05	0.05	0.28	0.36	0.08	1.00	0.42	0.07	0.42	0.08	0.21	0.42	0.30	0.91	0.84	0.92	-	0.07	0.07	-	0.07
prima.donnas	0.12	0.12	0.48	0.11	0.11	0.21	0.11	0.11	0.68	0.50	0.89	0.33	0.21	0.07	0.21	0.20	-	0.07	0.07	-	0.07
radio.silence	0.46	0.46	0.00	0.49	0.00	0.33	0.08	0.00	1.00	0.17	0.37	0.11	0.30	0.24	0.47	0.95	-	0.00	0.00	-	0.00
black.cloud	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
missing.links	0.48	0.48	0.16	0.92	0.02	0.76	0.90	0.00	0.34	0.03	0.97	0.90	0.75	0.64	0.59	0.60	-	0.01	0.01	-	0.01