



Q1 2020 GitHub Developer Activity Series - Part 1

AT LEAST ONE OF THE ANALYSTS PARTICIPATING IN THE PREPARATION OF THIS REPORT OWNS ONE OR MORE DIGITAL ASSETS MENTIONED IN THIS REPORT. YOU ARE RESPONSIBLE FOR DETERMINING WHETHER ANYTHING CONTAINED HEREIN IS SUITABLE FOR YOUR PARTICULAR CIRCUMSTANCES, AND FOR SEEKING PROFESSIONAL TAX, LEGAL, AND/OR INVESTMENT ADVICE AS APPROPRIATE. PLEASE SEE THE OTHER DISCLOSURES AT THE END OF THIS REPORT.

Overview

This report is a collation of key GitHub metrics across 178 of the top public digital assets by market cap, recent transaction volume, and institutional interest. A few assets that would be included, such as Tezos, use alternative repositories and so are out of scope for this version of the report.

Adoption and viability of public digital assets benefit from an ecosystem of demand, use, and support. Developer activity and engagement is one facet of this ecosystem, which can be measured by the underlying open source code repositories. The number of bugs fixed, the number of code changes proposed, the number of developers who return to contribute, and other measures all help better understand the depth of community involvement.

For this report, a set of metrics are employed to measure the absolute activity during Q1 2020, and in certain cases the change in activity from Q4 2019 to Q1 2020. Some of the measures are useful in comparing engagement of a token versus peers. A glossary of definitions is contained in Figure 1.

A follow-up report will cover a comparison of developer activity across digital asset sectors for insights into larger trends. As well, a more detailed analysis of individual token activity is available for purchase.

Figure 1 - Developer Activity Overview Glossary

Metric	Description
Open Issues	The total number of Open Issues in the defined period.
Closed Issues	The total number of Closed Issues in the defined period.
Open-to-Close Ratio (OCIR)	A direct measure of developer effectiveness. It is calculated by dividing the total number of Closed Issues (issues with the codebase that have been fixed by the development team) by the total number of Open Issues (issues with the codebase that have not been fixed by the development team).
Minimum Proposed Pull Request Requirement (PPR)	A measure of developer activity. It is calculated by adding all Pull Requests (requests to change the codebase) proposed by internal or external developers, or by the users of the codebase.
Minimum Merged Pull Request Requirement (MPR)	A measure of developer activity. It is calculated by adding all Pull Requests (requests to change the codebase) implemented by internal or external developers.
Commits	A commit is an approved change to a project's source code that the project's community and administrators agree is an improvement. This metric can be used as a benchmark since a forked project inherits all the code commits of its predecessors.
Number of Releases	A measure of a project's software updates over a period.
Average Size of Release	A measure of a project's development team's ability to release efficient and clean software updates. Each release is compared to its predecessor to gather an average size across all releases. This metric is measured in megabytes.
Average Time-to-Close Pull Request (T2C)	A measure of a project's ability to efficiently close pull requests in a timely manner. In the case of this report, the period is one business quarter or approximately 90 days.
Developers (Total)	The total amount of developers that have contributed to a project in the time. In the case of this report, the period is one-business quarter or approximately 90 days.
Developers (Repeat)	A repeat developer has contributed code for a minimum 10 days in a month period.
Developers (Casual)	A casual developer has contributed code for a minimum two days and maximum nine days in a month period.
Developers (One Time)	A one-time developer has contributed code one day in a month period.
Number of Forks	<p>A fork is a copy of a repository that a developer manages. Forks let you make changes to a project without affecting the original repository. You can fetch updates from or submit changes to the original repository with pull requests. In open source projects, forks are often used to iterate on ideas or changes before they are offered back to the upstream repository.</p> <p>A project can only be forked once per developer account; therefore, it is difficult for nefarious actors to manipulate the metric.</p>

Source: Digital Asset Research

Digital Asset Overview Metric Totals

Below are the results for the overview metrics of developer activity in Q1 2020. Percent change columns compare Q1 with Q42019.

Asset	Open Issues	Closed Issues	PPR	MPR	Commits		Releases		Release Size (MB)	T2C	Dev. (Total)		Dev. (Repeat)		Dev. (Casual)	Dev. (One)	Forks	OCIR
NAME	Total	Total	Total	Total	Q1	% Δ	Q1	% Δ	Total	Total	Q1	% Δ	Q1	% Δ	Total	Total	Total	Total
Ox	13	17	106	87	378	-52%	5	-38%	16.12	103	2494	-12%	140	-74%	1237	1117	24	0.76
Adex	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
aelf	104	88	254	134	1954	1%	2	-60%	13.68	243	2287	-9%	845	-13%	1242	200	20	1.18
Aeron	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Aeternity	50	29	47	48	109	-58%	3	-70%	12.10	52	1289	-44%	21	-91%	788	480	0	1.72
AION	2	15	30	28	241	5%	5	0%	183.12	33	453	-53%	111	-46%	180	162	1	0.13
AirSwap	0	0	1	0	1	-89%	0	0%	0.00	0	50	-85%	0	0%	0	50	1	N/A
Algorand	80	45	190	162	155	-25%	6	600%	86.29	194	2160	-3%	208	-32%	1000	952	13	1.78
Ambrosus	0	1	13	14	19	280%	0	0%	0.00	14	290	-4%	0	0%	98	192	1	0.00
AppCoins	8	7	19	12	45	-13%	0	0%	0.00	17	389	36%	7	700%	155	227	2	1.14
Aragon	48	31	72	69	69	10%	0	0%	0.00	76	1500	-11%	22	-51%	744	734	5	1.55
Ardor	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Ark	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	1	N/A
Augur	666	888	1006	965	3283	300%	0	-100%	0.00	1012	3198	36%	1475	43%	1291	432	10	0.75
Bancor	4	1	18	7	88	-81%	0	0%	0.00	7	397	11%	43	-53%	268	86	16	4.00
Basic Attention Token	27	16	75	63	99	-30%	0	-100%	0.00	70	649	4%	11	-92%	515	123	1	1.69
Binance Coin	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Bitcoin	151	156	489	312	510	-47%	1	0%	7.58	484	8660	-22%	368	-36%	2906	5386	616	0.97
Bitcoin Cash	6	4	3	0	436	21%	8	33%	59.87	3	1401	-32%	270	26%	382	749	19	1.50
Bitcoin Diamond	1	0	0	0	0	0%	0	0%	0.00	0	30	-62%	0	0%	0	30	1	N/A
Bitcoin Gold	3	1	1	1	2	0%	1	100%	6.40	1	151	3%	0	0%	29	122	2	3.00
Bitcoin SV	36	20	12	0	317	-37%	4	300%	16.46	6	2658	34%	75	-66%	983	1600	30	1.80
Bitshares	15	14	23	19	3	-40%	0	0%	0.00	21	258	-69%	26	100%	58	174	6	1.07
BitTorrent	1	0	1	0	0	0%	0	0%	0.00	0	60	6000%	0	0%	0	60	3	N/A

Asset	Open Issues	Closed Issues	PPR	MPR	Commits		Releases		Release Size (MB)	T2C	Dev. (Total)		Dev. (Repeat)		Dev. (Casual)	Dev. (One)	Forks	OCIR
NAME	Total	Total	Total	Total	Q1	% Δ	Q1	% Δ	Total	Total	Q1	% Δ	Q1	% Δ	Total	Total	Total	Total
Bluzelle	0	0	0	0	0	-100%	0	0%	0.00	0	0	-100%	0	0%	0	0	1	N/A
bnktothefuture	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Boscoin	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Boscoin	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Box Token	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Bytecoin	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Bytom	2	4	11	8	11	-59%	1	0%	18.55	10	300	-50%	0	0%	73	227	7	0.50
Cardano	10	5	8	7	48	85%	0	-100%	0.00	8	770	-20%	0	0%	326	444	9	2.00
Chainlink	14	15	462	356	1527	-4%	2	-33%	26.62	454	2605	3%	886	39%	1154	565	26	0.93
Cindicator	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Civic	9	1	30	26	469	76%	9	350%	367.49	28	2104	242%	266	131%	891	947	9	9.00
Cortex	2	2	91	89	442	-14%	14	-73%	208.62	92	242	-48%	90	27%	59	93	3	1.00
Cosmos	4	2	1	0	340	-58%	0	0%	0.00	0	699	-20%	204	-43%	291	204	16	2.00
Credits	0	0	2	2	338	-58%	1	100%	6.50	4	610	-23%	200	-45%	292	118	24	N/A
Crypterium	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Crypterium	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Crypto.com	271	197	287	210	418	-1%	3	50%	2.07	282	1626	12%	466	-17%	880	280	6	1.38
CyberMiles	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Dai	2	0	3	2	5	-78%	0	0%	0.00	2	164	-77%	0	0%	37	127	14	N/A
Dash	9	3	125	119	48	-60%	3	50%	20.64	127	879	-12%	96	-40%	328	455	23	3.00
Decentraland	12	3	79	73	353	46%	0	0%	0.00	79	1172	369%	240	321%	623	309	0	4.00
Decred	21	18	137	118	314	136%	2	200%	13.42	131	1436	70%	69	-46%	516	851	18	1.17
Dent	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
DigiByte	1	1	3	1	0	-100%	0	0%	0.00	1	126	-51%	0	0%	0	126	4	1.00
DigixDAO	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
District0x	0	0	0	0	0	0%	0	-100%	0.00	0	0	0%	0	0%	0	0	0	N/A
Dock	0	0	3	2	2	200%	0	0%	0.00	2	32	-6%	0	0%	25	7	0	N/A
Dogecoin	4	2	4	0	0	-100%	0	-100%	0.00	0	181	-58%	0	0%	0	181	17	2.00
Dragonchain	1	1	25	26	24	-68%	2	-60%	7.83	26	372	-37%	20	-80%	197	155	3	1.00
Eidoo	0	0	1	0	0	0%	0	0%	0.00	0	43	760%	0	0%	0	43	0	N/A
Elastos	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Enigma	1	0	16	13	62	-66%	0	0%	0.00	14	635	-33%	30	-56%	365	240	5	N/A

Asset	Open Issues	Closed Issues	PPR	MPR	Commits		Releases		Release Size (MB)	T2C	Dev. (Total)		Dev. (Repeat)		Dev. (Casual)	Dev. (One)	Forks	OCIR
NAME	Total	Total	Total	Total	Q1	% Δ	Q1	% Δ	Total	Total	Q1	% Δ	Q1	% Δ	Total	Total	Total	Total
Enjin	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
EOS	120	113	399	333	636	66%	11	83%	215.03	380	4869	0%	194	-24%	2083	2592	78	1.06
Ethereum	142	127	206	140	168	-10%	3	-25%	28.53	203	6016	-7%	54	-73%	1459	4503	294	1.12
Ethereum Classic	1	1	1	0	0	-100%	0	-100%	0.00	0	83	-84%	0	0%	0	83	6	1.00
Factom	9	6	33	23	28	-89%	1	-50%	3.45	24	761	-49%	0	-100%	377	384	3	1.50
FunFair	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Gas	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Genesis Vision	0	0	336	335	1956	-41%	0	0%	0.00	347	744	77%	524	65%	145	75	0	N/A
GIFTO	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Gnosis	150	147	277	251	284	23%	15	67%	13.24	265	1287	44%	290	35%	637	360	0	1.02
GoChain	80	45	190	162	155	-25%	6	600%	86.29	194	2160	-3%	208	-32%	1000	952	13	1.78
Golem	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Grin	33	46	75	67	64	-10%	7	17%	9.92	74	1456	-24%	34	13%	702	720	33	0.72
Groestlcoin	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
GXChain	1	9	2	2	38	-12%	4	400%	9.12	4	198	136%	32	23%	73	93	1	0.11
Holochain	16	4	128	87	818	-67%	12	-72%	24.30	121	2064	-18%	386	-50%	1109	569	10	4.00
Horizen	10	5	16	15	31	-14%	2	0%	14.01	18	356	-4%	0	0%	180	176	5	2.00
Huobi Token	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
HyperCash	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
ICON	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
iExec rlc	4	2	8	8	26	18%	1	0%	0.24	8	263	-31%	0	0%	136	127	1	2.00
Ignis	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
IOST	2	1	6	7	26	24%	1	0%	14.05	8	332	-46%	0	0%	187	145	0	2.00
IOTA	52	46	73	57	121	5%	2	0%	299.11	61	1183	-2%	43	438%	726	414	4	1.13
IoTeX	54	61	206	194	188	42%	3	-40%	8.00	217	1620	-7%	252	35%	900	468	6	0.89
Komodo	2	0	29	27	0	-100%	0	0%	0.00	29	493	-52%	0	-100%	247	246	4	N/A
KuCoinShares	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Kyber Network	2	0	102	99	269	17%	6	0%	170.37	104	607	-20%	202	-45%	252	153	4	N/A
LEO Token	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Lisk	228	240	193	188	1640	11%	4	400%	16.68	202	1907	-31%	657	-13%	828	422	5	0.95
Litecoin	7	2	7	0	0	0%	0	0%	0.00	3	287	0%	0	0%	26	261	44	3.50
Loom	9	5	19	18	33	-34%	0	0%	0.00	18	476	-60%	0	-100%	263	213	3	1.80

Asset	Open Issues	Closed Issues	PPR	MPR	Commits		Releases		Release Size (MB)	T2C	Dev. (Total)		Dev. (Repeat)		Dev. (Casual)	Dev. (One)	Forks	OCIR
NAME	Total	Total	Total	Total	Q1	% Δ	Q1	% Δ	Total	Total	Q1	% Δ	Q1	% Δ	Total	Total	Total	Total
Loopring	8	4	132	63	53	-75%	1	-50%	10.87	133	727	-50%	164	-41%	203	360	2	2.00
Mainframe	0	0	0	0	0	0%	0	0%	0.00	0	0	-100%	0	-100%	0	0	0	N/A
MakerDAO	1	1	8	3	39	70%	0	0%	0.00	9	475	-33%	2	200%	241	232	9	1.00
Matrix AI Network	12	3	79	73	353	45%	0	-100%	0.00	79	1172	353%	240	293%	623	309	0	4.00
Medicalchain	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Metaverse ETP	6	4	23	8	28	2800%	1	100%	3.11	17	392	296%	0	0%	127	265	7	1.50
Mithril	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Moeda Loyalty Points	0	0	0	0	0	0%	0	-100%	0.00	0	0	0%	0	0%	0	0	0	N/A
MonaCoin	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Monero	44	25	92	146	217	-37%	1	-50%	11.49	150	2804	-39%	22	-82%	784	1998	68	1.76
Nano	13	15	226	208	214	95%	0	-100%	0.00	226	1170	1%	392	216%	536	242	19	0.87
Nano	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
NavCoin	3	10	18	20	28	-70%	1	-67%	8.48	20	494	-43%	0	-100%	322	172	7	0.30
Neblio	15	10	7	8	78	-76%	0	-100%	0.00	8	414	46%	9	-82%	274	131	0	1.50
Nebulas	3	2	1	0	24	-27%	1	100%	206.05	0	120	-22%	15	-42%	51	54	3	1.50
NEM	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
NEO	55	38	77	38	29	-66%	0	0%	0.00	71	1876	-17%	7	-95%	800	1069	16	1.45
Nexus	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Nucleus Vision	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Nuls	2	1	13	12	103	-63%	1	-50%	11.97	12	717	-28%	24	-81%	373	320	7	2.00
Numerair	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Numerair	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Nxt	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
OAX Foundation	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Obyte	5	1	13	12	131	52%	0	0%	0.00	15	612	51%	80	281%	303	229	0	5.00
Odyssey	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
OmiseGo	70	57	131	108	100	-25%	9	900%	21.97	133	1823	-11%	152	-28%	955	716	2	1.23
OmiseGo	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Ontology	6	9	23	20	39	-7%	2	0%	29.64	22	724	-22%	17	-29%	306	401	4	0.67
OST Platform	2	1	6	7	26	24%	1	0%	14.05	8	332	-46%	0	0%	187	145	0	2.00
Paxos Standard	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
PCHAIN	56	36	185	161	6	20%	2	0%	23.98	168	1177	16%	215	129%	300	662	22	1.56

Asset	Open Issues	Closed Issues	PPR	MPR	Commits		Releases		Release Size (MB)	T2C	Dev. (Total)		Dev. (Repeat)		Dev. (Casual)	Dev. (One)	Forks	OCIR
NAME	Total	Total	Total	Total	Q1	% Δ	Q1	% Δ	Total	Total	Q1	% Δ	Q1	% Δ	Total	Total	Total	Total
Peercoin	10	14	38	28	4	-92%	5	500%	21.06	38	450	57%	0	0%	249	201	1	0.71
PIVX	58	39	190	165	669	46%	2	0%	23.98	172	1259	1%	277	23%	258	724	24	1.49
po.et	0	0	0	0	0	-100%	0	-100%	0.00	0	2	-98%	0	0%	2	0	0	N/A
Polymath	9	12	113	86	161	293%	0	0%	0.00	122	1472	74%	68	6800%	896	508	10	0.75
Populous	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Propy	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
pundi x	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
qash	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
QLC Chain	106	107	80	75	138	-34%	3	-63%	3.18	78	944	-9%	182	-44%	605	157	0	0.99
Qtum	3	2	21	19	51	-81%	2	100%	29.90	20	671	-68%	44	-74%	222	405	9	1.50
Quantstamp	1	1	0	0	0	0%	0	0%	0.00	0	30	-67%	0	0%	0	30	3	1.00
Quantum	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
QuarkChain	7	5	28	21	15	-85%	0	0%	0.00	24	476	-50%	0	-100%	278	198	2	1.40
Raiden Network Token	144	192	345	330	597	2%	1	-50%	2.79	365	2447	-14%	487	-23%	1292	668	6	0.75
Raven Coin	12	10	38	34	47	-33%	3	300%	36.89	49	1040	-8%	0	0%	315	725	21	1.20
ReddCoin	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Refereum	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Republic Protocol	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Request Network	0	0	80	70	52	-39%	3	0%	2.67	79	747	11%	0	-100%	623	124	1	N/A
Revain	8	10	1006	965	602	-18%	1	100%	6.50	1012	3376	13%	154	-40%	1601	1621	24	0.80
Ripple	56	28	67	15	74	21%	3	300%	15.00	79	2781	5%	0	0%	1053	1728	34	2.00
Ruff	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Salt	0	0	0	0	0	0%	0	-100%	0.00	0	0	0%	0	0%	0	0	0	N/A
Santiment Network Token	1	0	198	191	567	-7%	0	0%	0.00	199	629	-19%	333	-27%	135	161	0	N/A
Siacoin	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	1	N/A
SingularityNET	6	2	6	4	60	-6%	3	0%	0.52	5	433	-41%	0	0%	161	272	0	3.00
Sirin Labs Token	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
SmartMesh	0	0	0	0	0	-100%	0	0%	0.00	0	25	-76%	0	0%	0	25	2	N/A
Sonm	0	0	0	0	0	-100%	0	0%	0.00	0	25	-76%	0	0%	0	25	2	N/A
Sreamr DATAcoin	0	0	114	118	504	7%	0	0%	0.00	123	1163	-21%	298	-11%	568	297	1	N/A
Status	222	325	289	251	277	8%	3	300%	41.79	286	3378	5%	541	8%	1742	1095	21	0.68
Steem	28	22	27	17	71	-51%	0	0%	0.00	21	842	16%	32	-64%	334	476	46	1.27

Asset	Open Issues	Closed Issues	PPR	MPR	Commits		Releases		Release Size (MB)	T2C	Dev. (Total)		Dev. (Repeat)		Dev. (Casual)	Dev. (One)	Forks	OCIR
NAME	Total	Total	Total	Total	Q1	% Δ	Q1	% Δ	Total	Total	Q1	% Δ	Q1	% Δ	Total	Total	Total	Total
Stellar	40	29	79	62	303	140%	9	50%	44.47	73	1177	-22%	144	243%	585	448	26	1.38
storj	49	32	47	31	561	-12%	10	-23%	51.49	54	4159	-36%	251	-64%	2173	1735	17	1.53
Storm	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Stratis	68	137	378	317	323	942%	2	200%	60.65	371	2526	89%	564	795%	1356	606	15	0.50
Syscoin	8	6	11	10	447	-29%	4	300%	481.56	11	2345	-15%	227	-38%	908	1210	6	1.33
Syscoin	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Telcoin	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
TenX	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Tether	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Tezos	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
THEKEY	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Theta	4	3	3	3	73	-73%	2	0%	81.81	3	478	-22%	9	-92%	303	166	2	1.33
Time New Bank	0	0	0	0	0	0%	0	-100%	0.00	0	0	0%	0	0%	0	0	0	N/A
Tron	41	40	195	155	602	-18%	2	100%	59.65	197	5021	13%	187	-38%	2274	2560	43	1.03
True USD	1	1	28	17	20	0%	0	0%	0.00	22	282	93%	0	0%	115	167	5	1.00
VeChain	4	3	26	19	64	7%	3	50%	5.92	24	643	112%	27	2700%	312	304	7	1.33
Verge	4	5	5	4	20	-71%	2	-60%	28.06	9	494	-27%	18	-44%	189	287	2	0.80
Vertcoin	1	2	3	1	1	100%	0	0%	0.00	2	146	78%	0	0%	0	146	2	0.50
Waltonchain	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Wanchain	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Waves	22	24	147	126	132	-25%	5	-17%	18.78	143	2211	-3%	78	-70%	1216	917	16	0.92
WAX	2	1	2	2	4	100%	1	100%	19.28	2	122	-68%	0	-100%	29	93	0	2.00
Wings	0	0	0	0	0	0%	0	0%	0.00	0	0	0%	0	0%	0	0	0	N/A
Zcash	53	53	82	71	252	1%	2	0%	11.75	90	1913	-3%	149	113%	983	781	17	1.00
Zcoin	10	10	11	6	101	-49%	0	-100%	0.00	7	895	-42%	66	-51%	283	546	10	1.00
Zilliqa	1	2	50	47	75	-76%	7	0%	8.25	48	725	-33%	65	-75%	413	247	9	0.50

Min	0	0	0	0	0	-100%	0	-100%	0.00	0	0	-100%	0	-100%	0	0	0	0.00
Max	666	888	1006	965	3283	2800%	15	900%	0.00	1012	8660	6000%	1475	6800%	2906	5386	616	9.00
Average	21.236	21.242	60.084	51.309	151.27	16%	1.39	25%	0.00	59.97	729.7	37%	82.051	60%	320.90	326.75	11.36	1.55

DISCLOSURES

You are permitted to store, display, analyze, modify, and print this report, but only for your own use. You are not permitted to (a) reverse engineer, decompile, decode, decrypt, disassemble, or in any way derive source code from this report; (b) modify, translate, adapt, alter, or create derivative works from this report; (c) copy (except as expressly permitted in the Subscription Services Agreement), distribute, publicly display, transmit, sell, rent, lease or otherwise exploit this report or grant any third party access to it; (d) frame or scrape or in-line link to the this report or use web crawlers, web spiders or other automated means to access, copy, index, process and/or store any of the information herein; (e) create apps, extensions, programs or other products or services that use any of the information herein; or (f) make or have made a service or product using similar ideas, features, functions or graphics of or providing a similar benefit as that provided by this report.

DAR DOES NOT MAKE AND HEREBY EXPRESSLY DISCLAIMS ALL WARRANTIES, ORAL OR WRITTEN, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. WITHOUT LIMITING THE FOREGOING, YOU AGREE THAT YOUR USE OF THIS REPORT IS AT YOUR SOLE RISK AND ACKNOWLEDGE THAT THIS REPORT IS PROVIDED "AS-IS" AND DAR DOES NOT MAKE ANY WARRANTIES WITH RESPECT TO THE OPERATION, AVAILABILITY, RELIABILITY, ORIGINALITY OR ADEQUACY OF THE SAME. THIS REPORT (INCLUDING ANY INFERENCES OR CONCLUSIONS DRAWN HEREIN) IS BASED ON INFORMATION DAR CONSIDERS RELIABLE, HOWEVER, DAR DOES NOT REPRESENT IT AS ACCURATE OR COMPLETE, AND IT SHOULD NOT BE RELIED ON AS SUCH. THIS REPORT (INCLUDING ANY INFERENCES OR CONCLUSIONS DRAWN HEREIN) IS PROVIDED FOR GENERAL INFORMATIONAL PURPOSES ONLY AND YOU ARE RESPONSIBLE FOR DETERMINING WHETHER ANYTHING CONTAINED HEREIN IS SUITABLE FOR YOUR PARTICULAR CIRCUMSTANCES, AND FOR SEEKING PROFESSIONAL TAX AND/OR INVESTMENT ADVICE AS APPROPRIATE. DAR DOES NOT GIVE TAX, LEGAL OR INVESTMENT ADVICE OR ADVOCATE THE PURCHASE OR SALE OF ANY SECURITY, INVESTMENT, CRYPTOCURRENCY OR DIGITAL ASSET. NONE OF THE INFORMATION CONTAINED IN THIS REPORT CONSTITUTES OR IS INTENDED TO CONSTITUTE A RECOMMENDATION BY DAR TO ACQUIRE, HOLD, INVEST IN, OR USE ANY PARTICULAR COIN, TOKEN, CRYPTOCURRENCY, PROTOCOL, COMPANY OR FOUNDATION.

You assume the entire risk of any use you make or permit to be made from this report. Without limiting the foregoing and to the maximum extent permitted by applicable law, in no event shall DAR have any liability regarding this report for damages, even if notified of such possibility.

The information contained herein is as of the date hereof and is subject to change without prior notice. We may provide oral or written market commentary or trading strategies to our clients that reflect opinions that are contrary to the opinions expressed in this research. Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance as past performance does not guarantee future results. None of DAR's products or services recommend, endorse, or otherwise express any opinion regarding any "coin", "token", "cryptocurrency" "protocol", "company" or "foundation" and none of DAR's products or services are intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such.