

**1 RQ1**

**2 RQ2**

**3 RQ3**

Domain	Non-Arch
CM	0.69
DSP	1.49
DC	0.95
SOAM	1.08
SDT	0.46
WD	0.75

Table 1: Chi-squared test results on decision types per domain, with intersected decision types. (RQ1) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Domain	Non-Arch
CM	0.66
DSP	1.57
DC	0.91
SOAM	
SDT	0.44
WD	0.70

Table 2: Chi-squared test results on decision types per domain, with simplified decision types. (RQ1) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Domains	Bug	New Feature	Task	Epic
CM	1.15	0.82	1.05	0.18
DSP	1.12	1.29	0.82	0.51
DC	1.15	0.92	0.77	4.55
SOAM	0.66		1.23	0.66
SDT		0.50	1.18	1.91
WD	0.82	0.81	1.23	0.35

Domains	Independent	Child	Parent
CM	1.06	0.45	0.48
DSP	0.89	1.97	2.06
DC	1.08	0.18	0.33
SOAM			
SDT	1.05	0.50	0.60
WD	1.01	1.08	0.63

Table 3: Chi-squared test results on the hierarchy characteristic per domain. (RQ2) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Table 4: Chi-squared test results on the issue\_type characteristic per domain. (RQ2) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Domains	Won'T Fix	Duplicate	Won'T Do	Fixed	Done
CM	2.49	1.40	1.51	1.17	0.07
DSP	1.37	1.31	0.72	1.10	0.56
DC	0.38	1.25		1.24	0.38
SOAM	0.74	0.44	1.23	0.95	1.33
SDT	1.31	0.76	0.71	0.68	1.94
WD	0.72	0.31		0.45	2.80

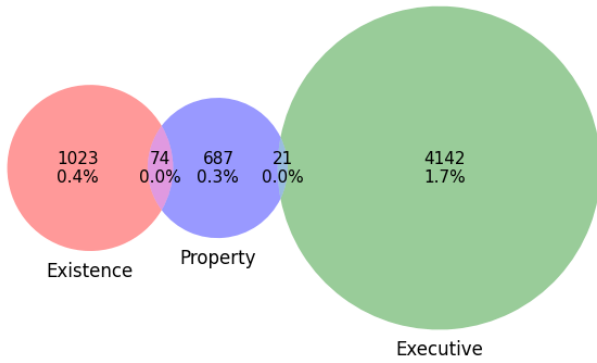
Table 5: Chi-squared test results on the resolution characteristic per domain. (RQ2) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Domains	Closed	Open	Resolved	In Progress
CM	1.14		0.67	0.60
DSP	0.63	1.99	1.52	1.73
DC	1.28	0.32	0.56	
SOAM	0.81	0.74	1.55	0.66
SDT	1.35	0.63	0.31	0.58
WD	1.15	0.54	0.81	0.43

Table 6: Chi-squared test results on the status characteristic per domain. (RQ2) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Content Management - Total Issues: 243860

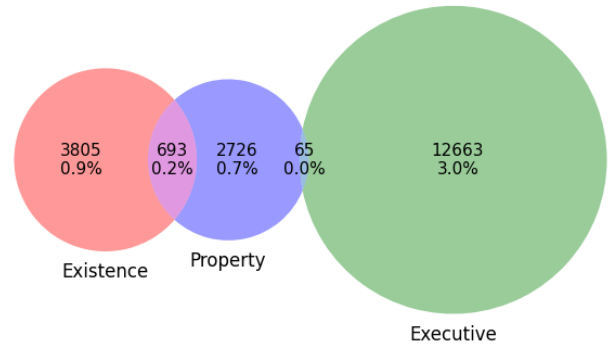
Non-architectural issues: 237913 (97.56%)



(a) Content Management

Data Storage & Processing - Total Issues: 416260

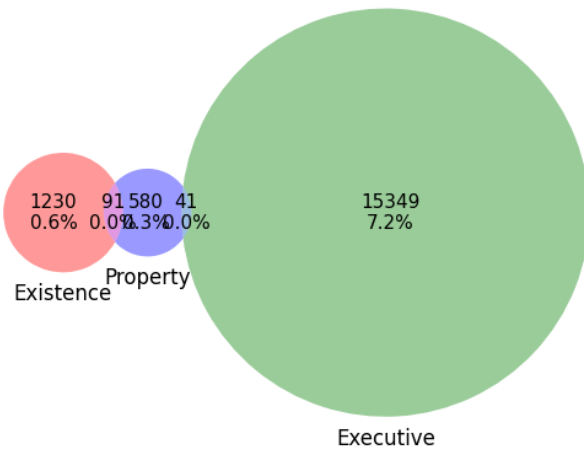
Non-architectural issues: 396308 (95.21%)



(b) Data Storage & Processing

DevOps And Cloud - Total Issues: 211759

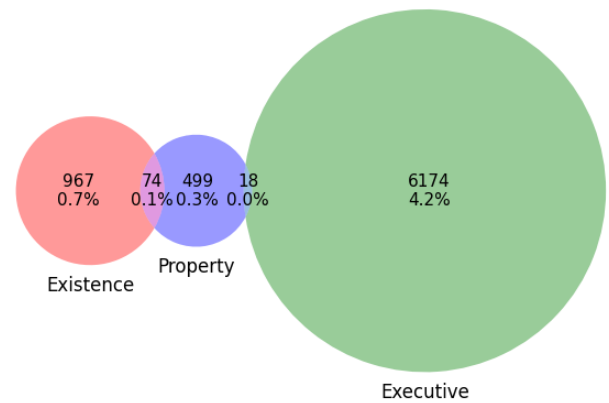
Non-architectural issues: 194468 (91.83%)



(c) DevOps and Cloud

Soa And Middlewares - Total Issues: 145933

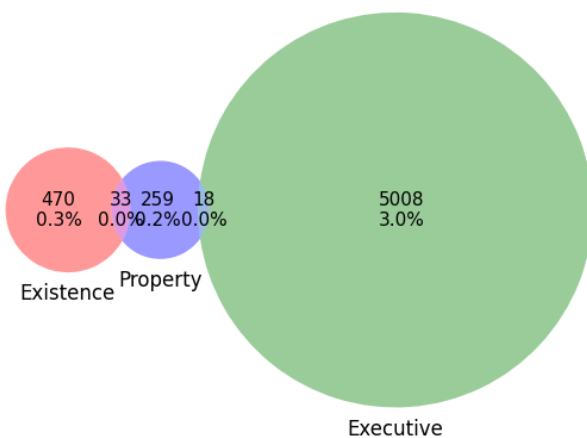
Non-architectural issues: 138201 (94.70%)



(d) SOA and Middlewares

Software Development Tools - Total Issues: 166588

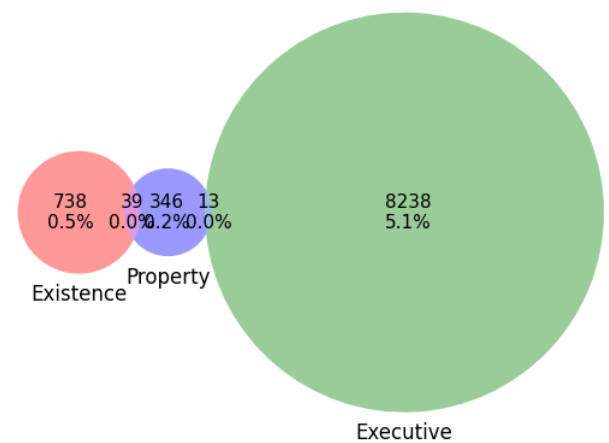
Non-architectural issues: 160800 (96.53%)



(e) Software Development Tools

Web Development - Total Issues: 161384

Non-architectural issues: 152010 (94.19%)



(f) Web Development

Figure 1: Venn diagrams of the amount of issues divided over the design decision types, per domain (RQ1).

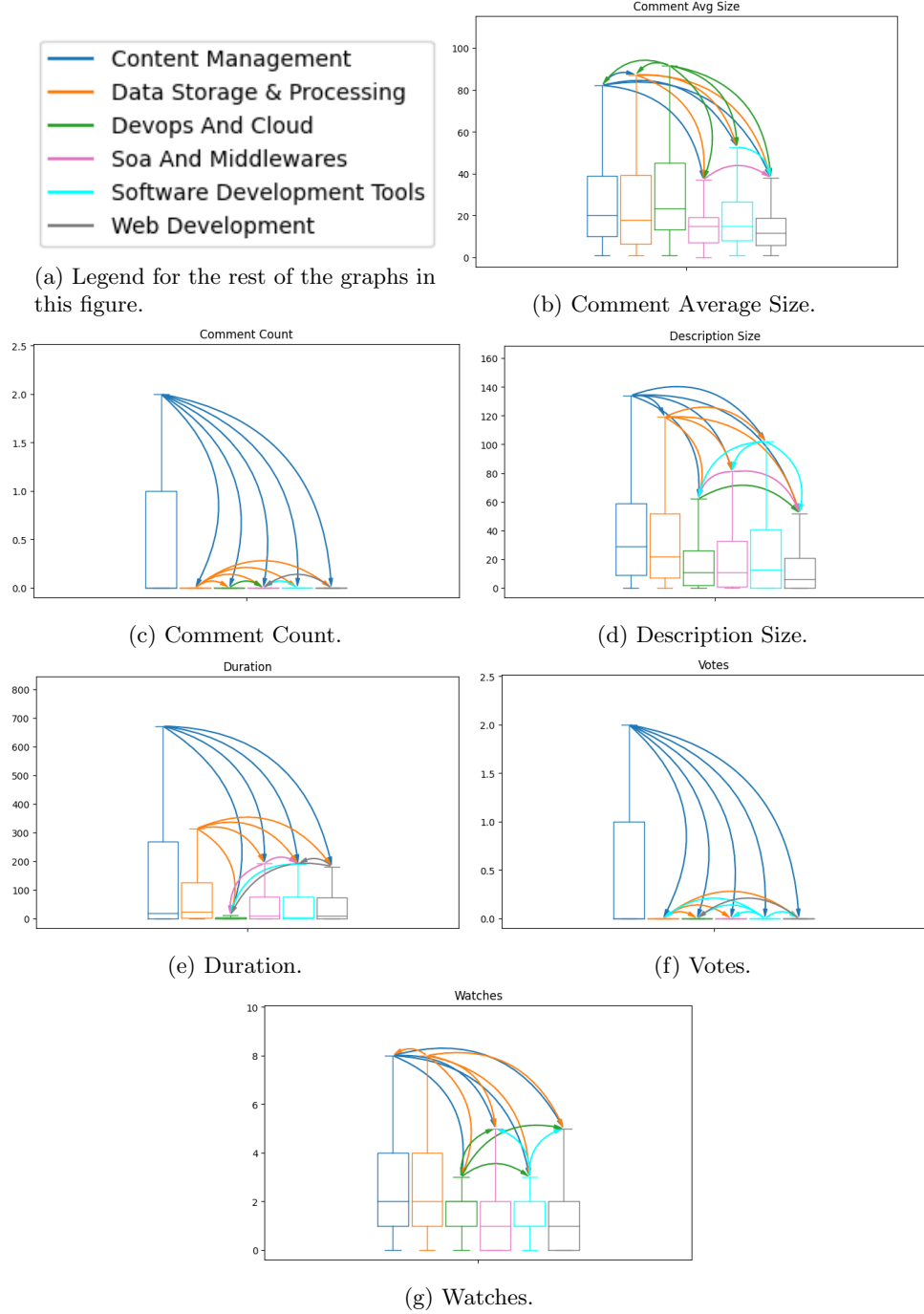
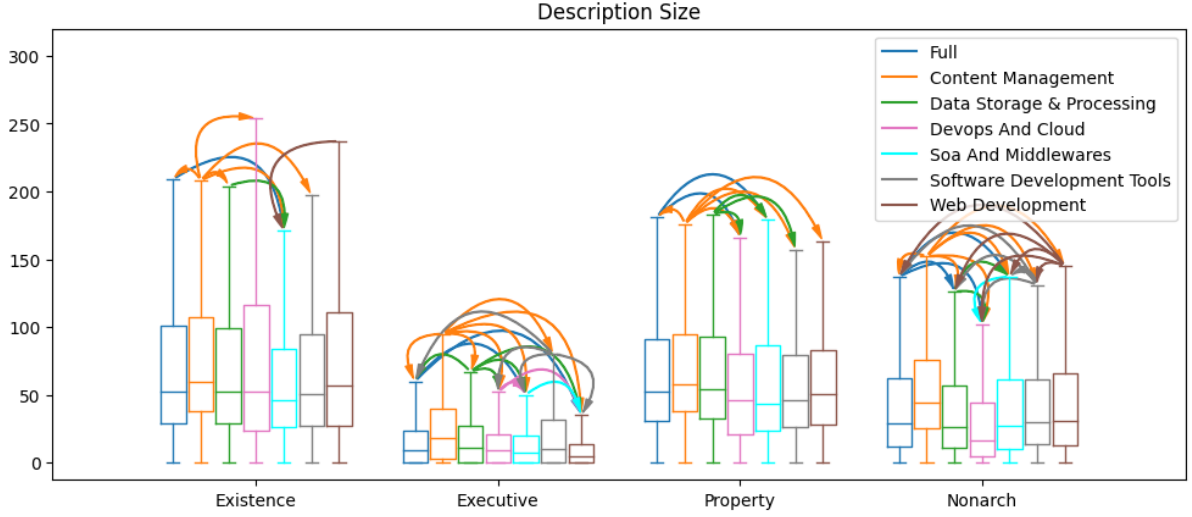


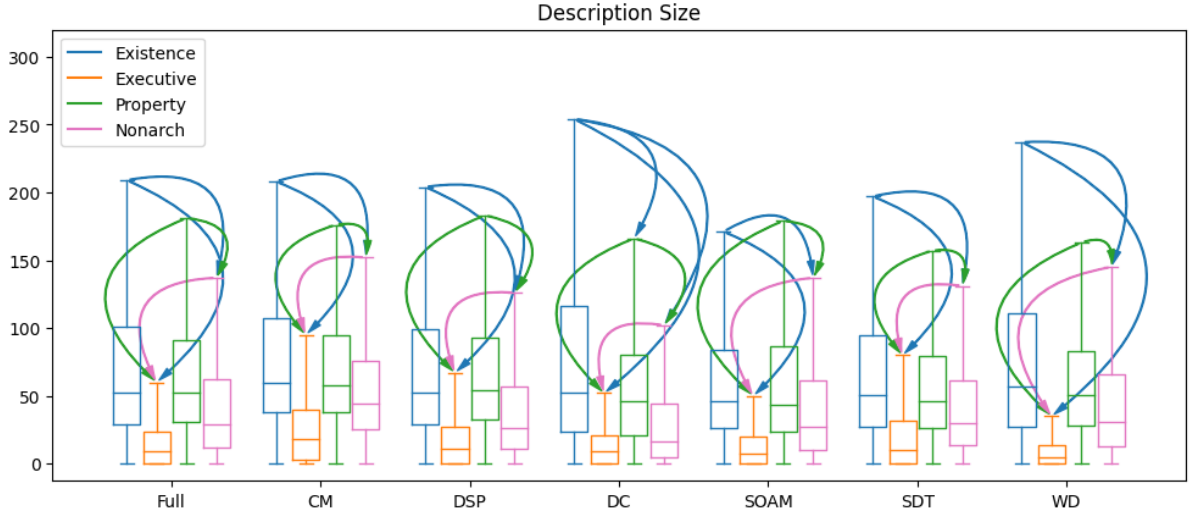
Figure 2: Box plots of the continuous data issue characteristics. Arrows indicate significantly larger means according to the Mann-Whitney test. (RQ2)

All Domains	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Independent	0.87			0.94	0.84			1.00
Child	1.96	0.84		1.11	1.90	0.35		
Parent	5.90	1.92		5.11	8.62	5.52		0.91
CM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Independent	0.94	0.99		0.97	0.90			1.00
Child	3.05	1.48		1.69	3.31			0.98
Parent	7.83	3.01		6.48	20.05			0.91
DSP	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Independent	0.79	0.98		0.93	0.83	0.89		1.00
Child	1.83	0.86			1.39			1.00
Parent	5.41	2.76		4.74	6.77	9.68		0.86
DC	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Independent	0.96	1.04						1.00
Parent	5.61	0.72		2.08				
Child		0.20		0.40				1.07
SOAM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Independent	0.96	0.96		1.03				1.00
Parent	3.55	1.80			3.79			0.94
Child		1.41		0.30				0.98
SDT	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Parent	4.28	1.58		5.31	6.41			0.96
Independent		1.01						
Child		0.69		0.40				1.01
WD	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Independent	0.95	0.96						1.00
Child		1.59		0.49				0.97
Parent	4.51	1.67		5.72				0.93

Table 7: Chi-squared test results for the relation between the hierarchy issue characteristic and simple decision type contained in the issue, RQ3. [intersected](#) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

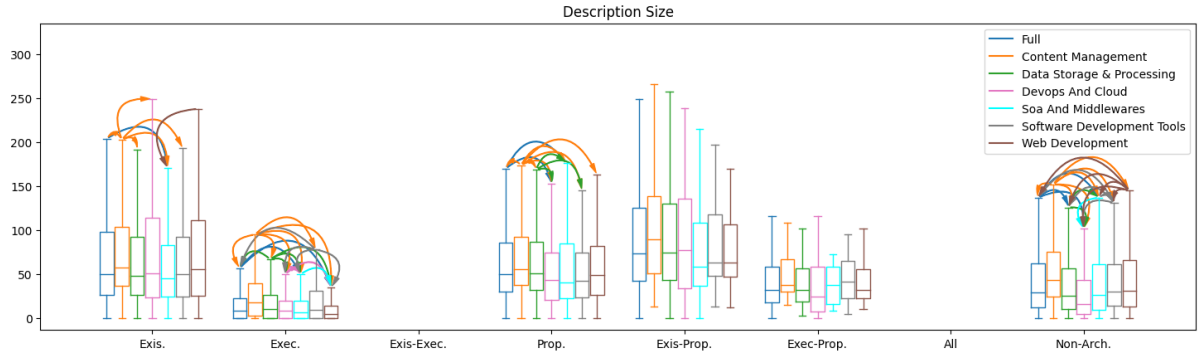


(a) Grouped by decision type first and subgrouped by domain.

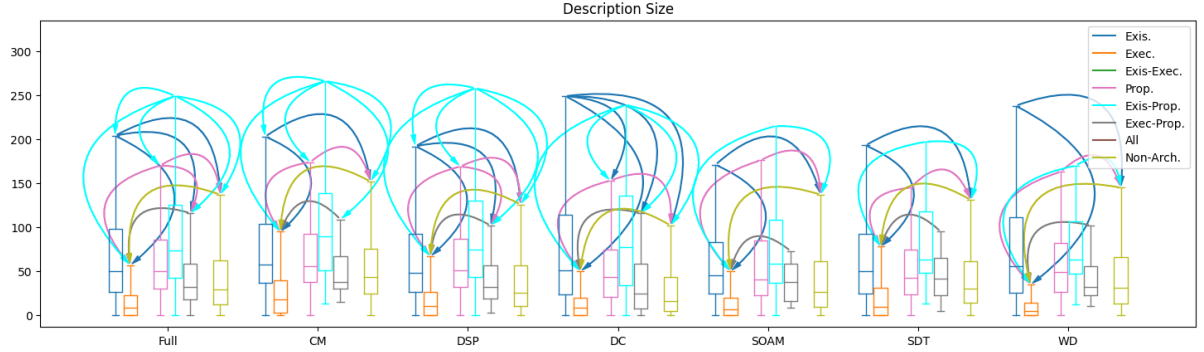


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 3: Mann-Whitney test on the relations between description size, domain, and decision type contained in the issue, simple decision view.



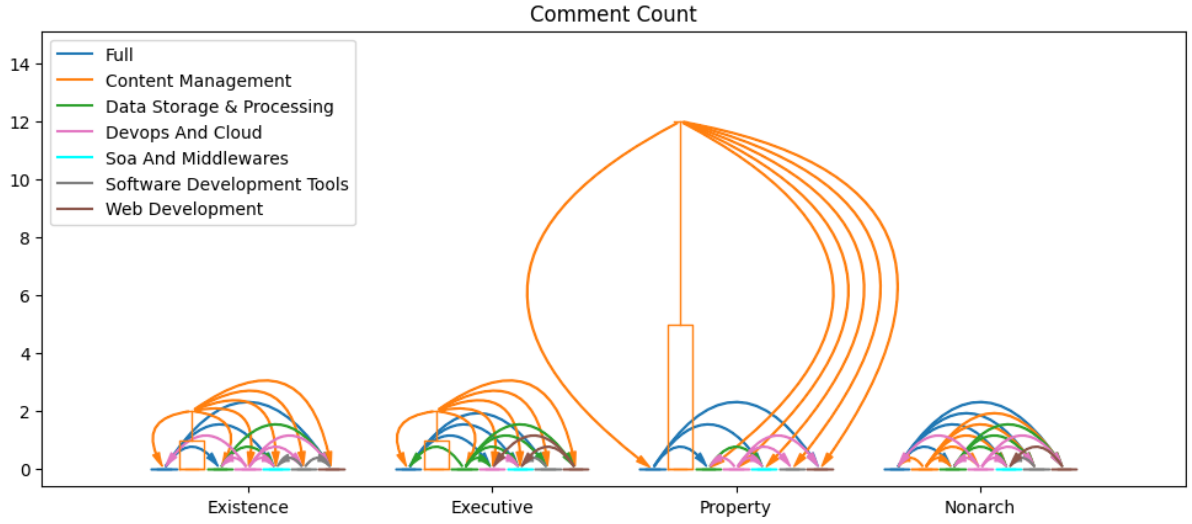
(a) Grouped by decision type first and subgrouped by domain.



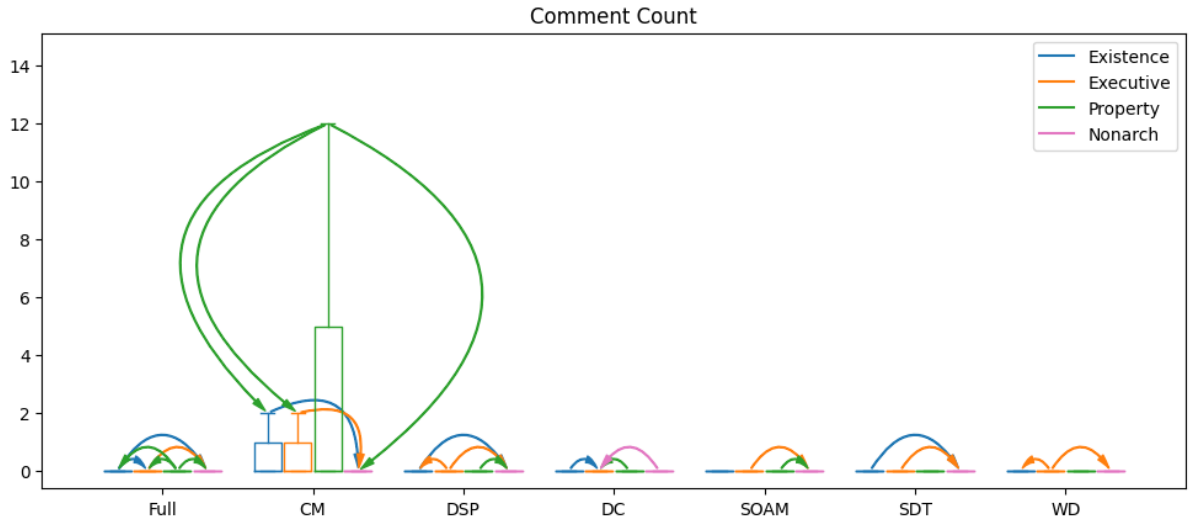
(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 4: Mann-Whitney test on the relations between description size, domain, and decision type contained in the issue, intersected decision view.



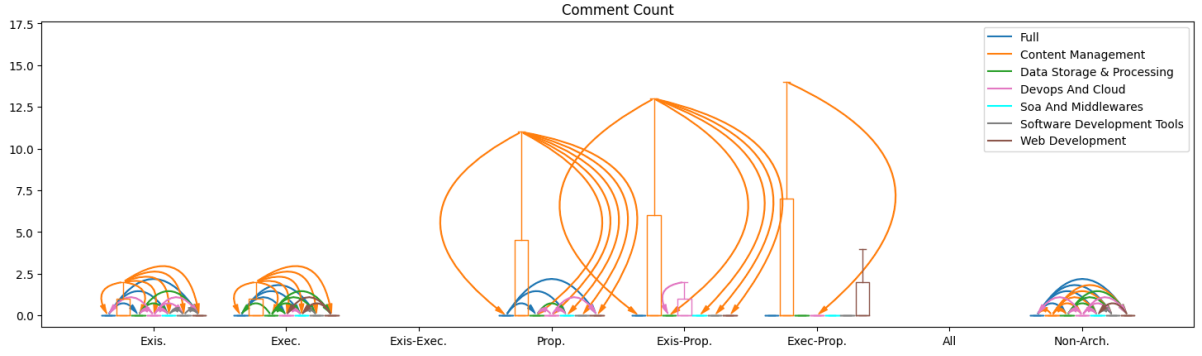


(a) Grouped by decision type first and subgrouped by domain.

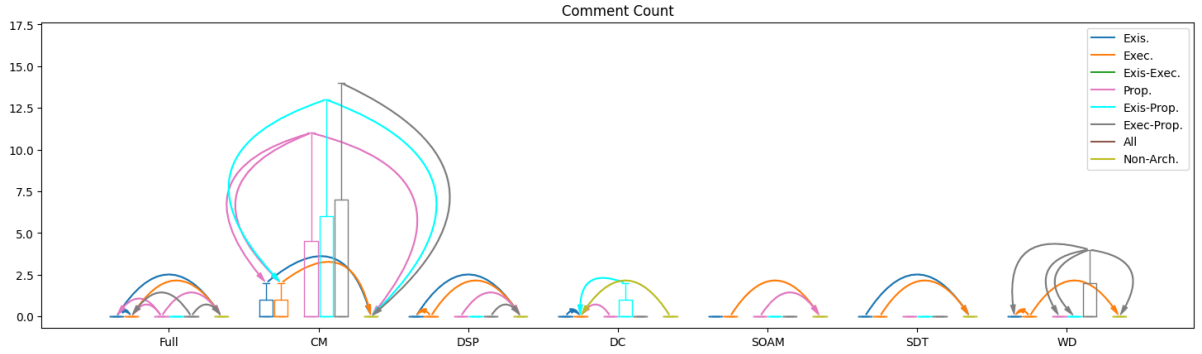


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 5: Mann-Whitney test on the relations between comment count, domain, and decision type contained in the issue, simple decision view.

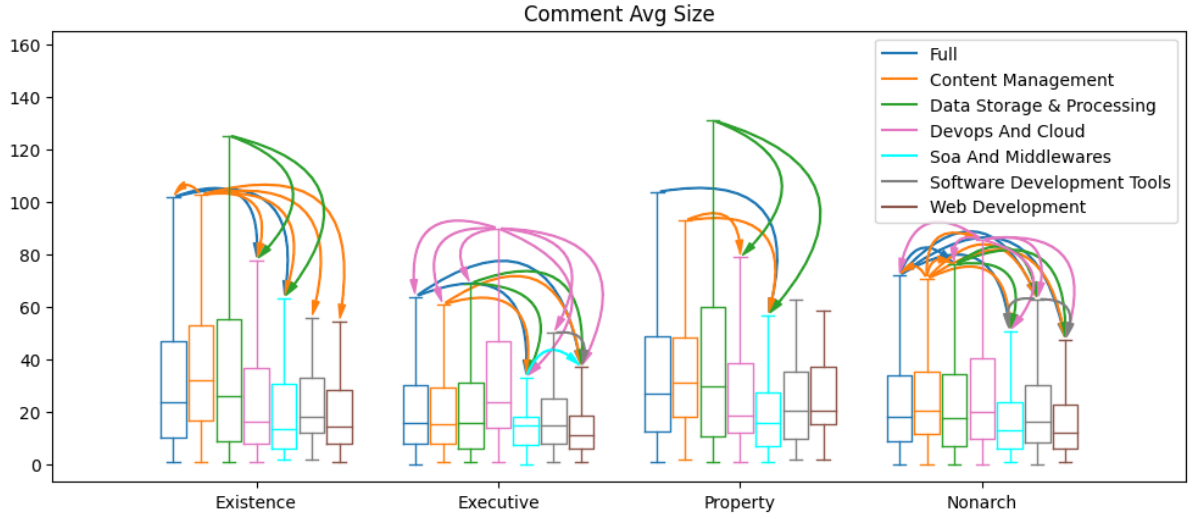


(a) Grouped by decision type first and subgrouped by domain.

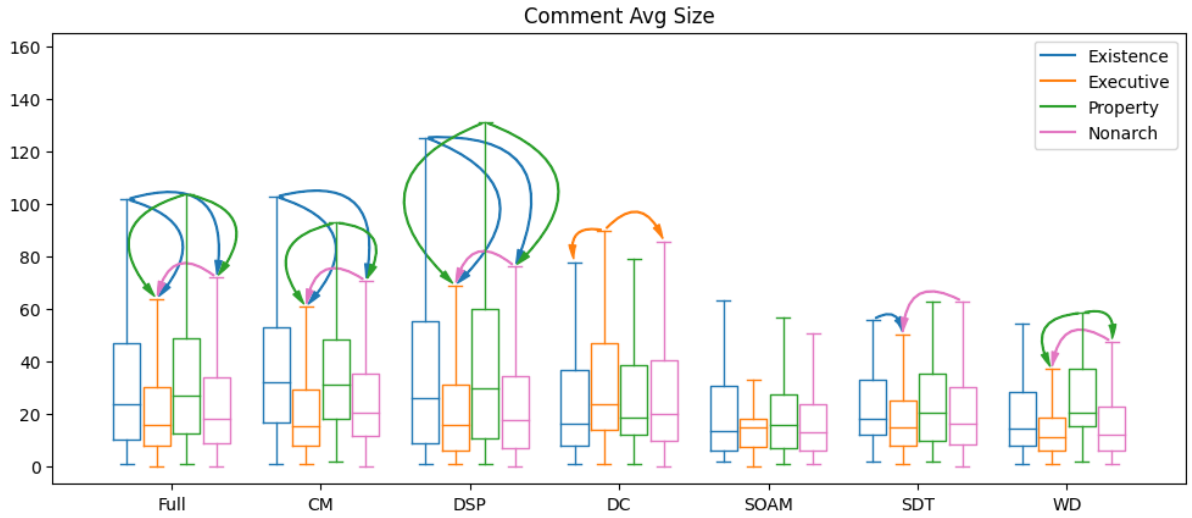


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 6: Mann-Whitney test on the relations between comment count, domain, and decision type contained in the issue, intersected decision view.

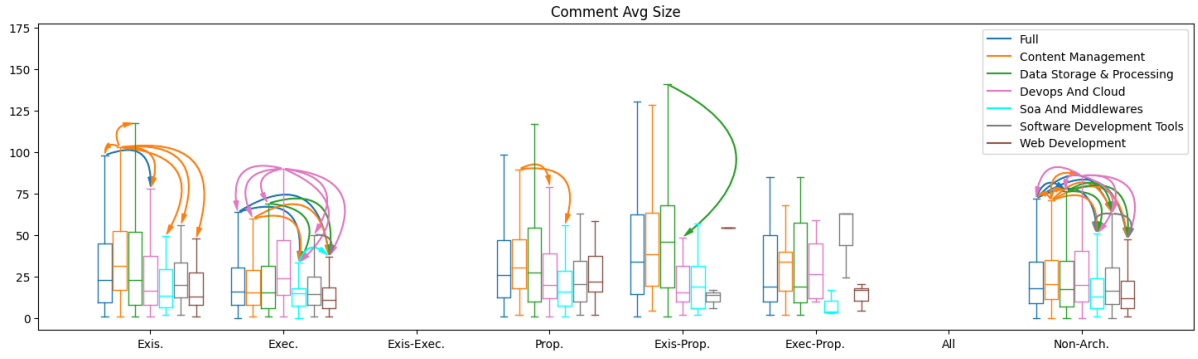


(a) Grouped by decision type first and subgrouped by domain.

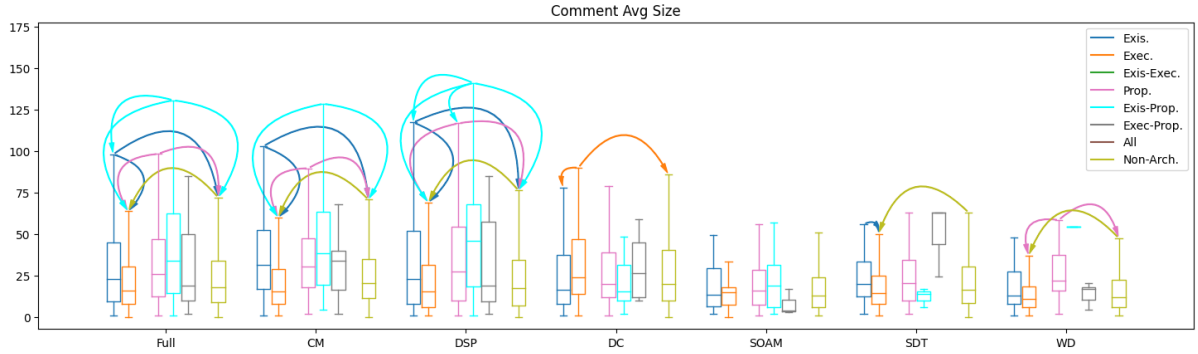


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 7: Mann-Whitney test on the relations between average comment size, domain, and decision type contained in the issue, simple decision view.

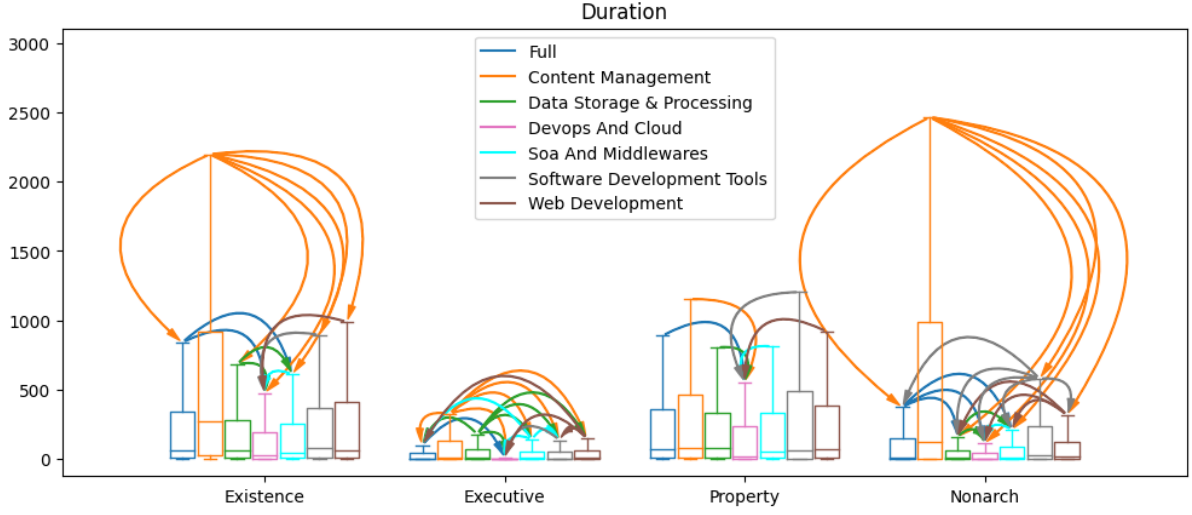


(a) Grouped by decision type first and subgrouped by domain.

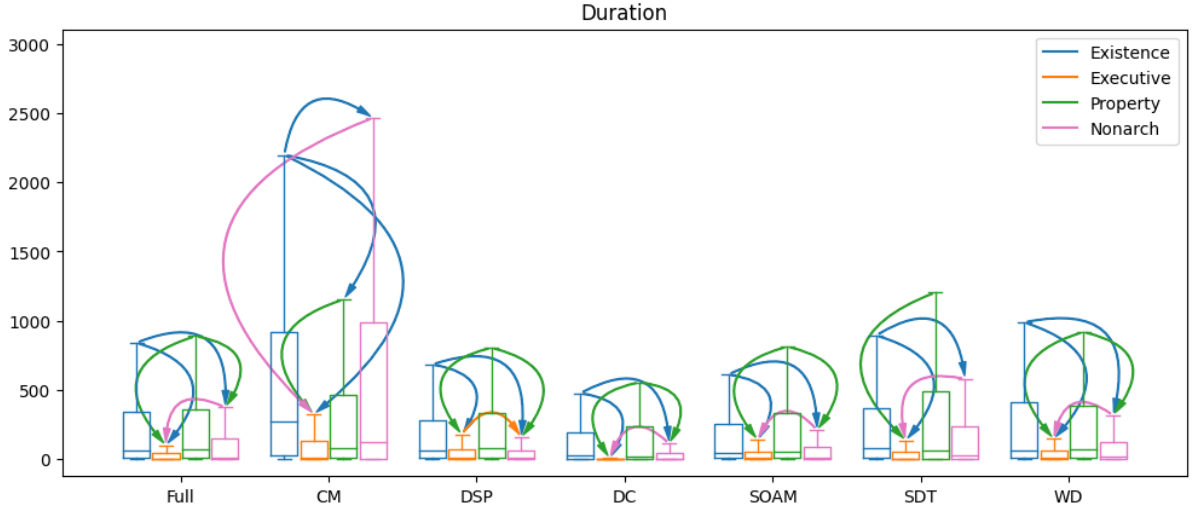


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 8: Mann-Whitney test on the relations between average comment size, domain, and decision type contained in the issue, intersected decision view.

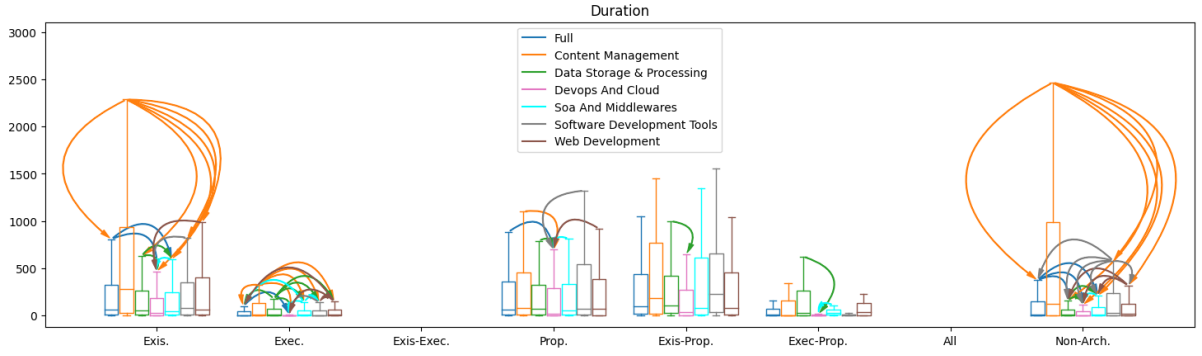


(a) Grouped by decision type first and subgrouped by domain.

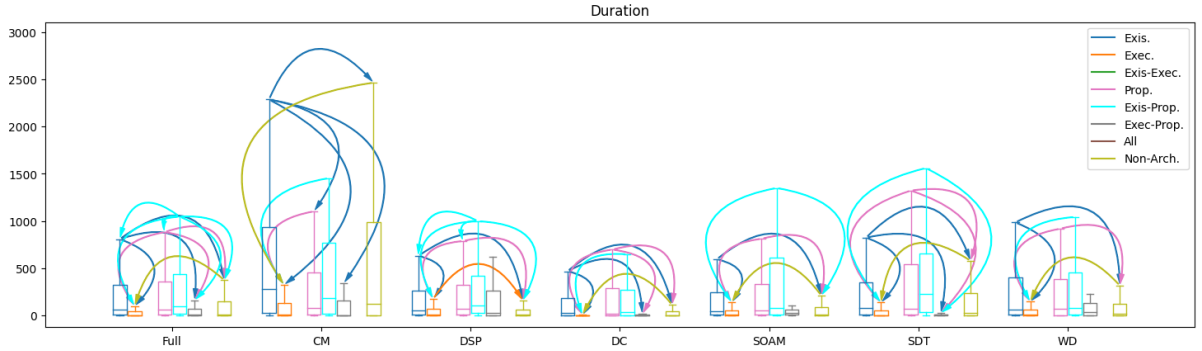


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 9: Mann-Whitney test on the relations between duration, domain, and decision type contained in the issue, simple decision view.

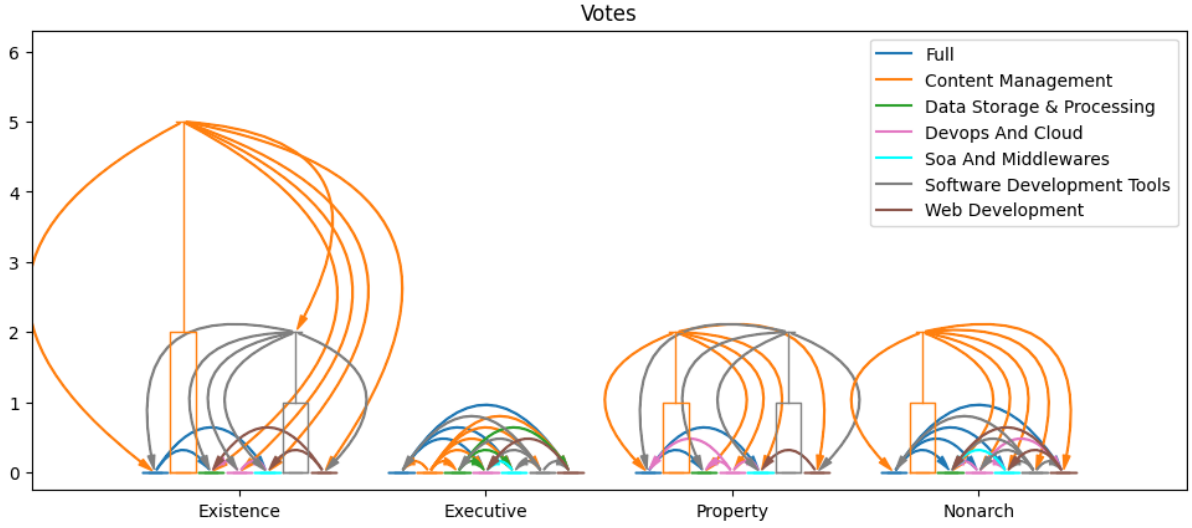


(a) Grouped by decision type first and subgrouped by domain.

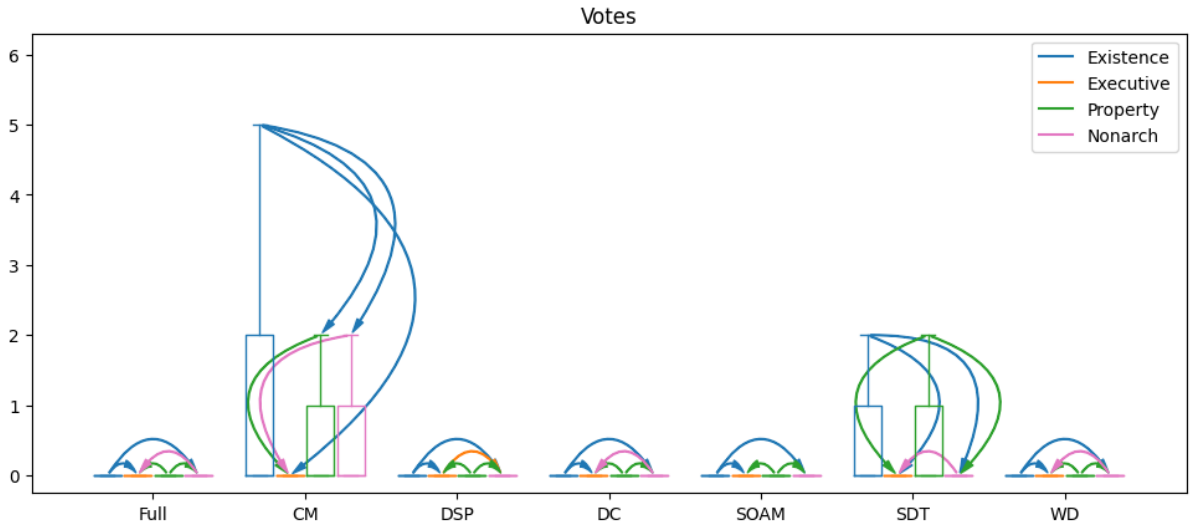


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 10: Mann-Whitney test on the relations between duration, domain, and decision type contained in the issue, intersected decision view.

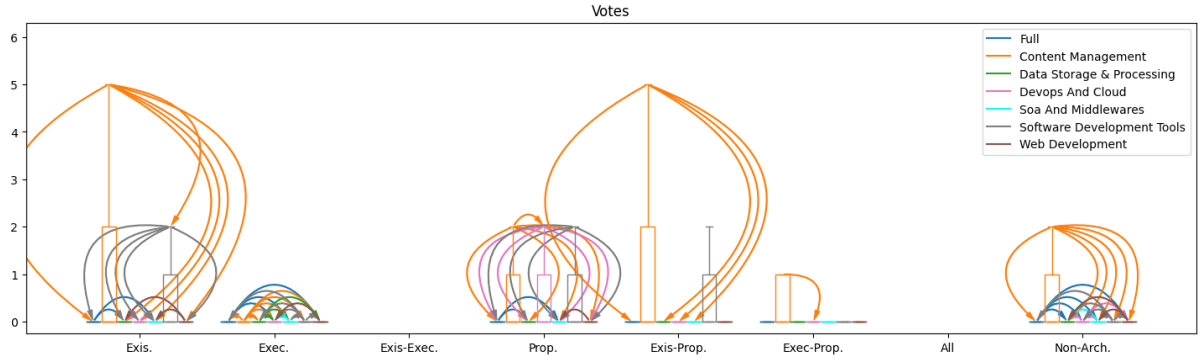


(a) Grouped by decision type first and subgrouped by domain.

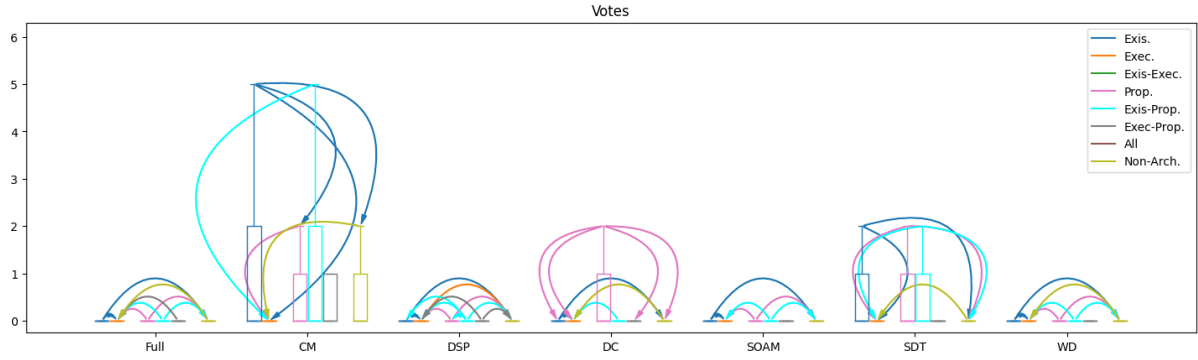


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 11: Mann-Whitney test on the relations between votes, domain, and decision type contained in the issue, simple decision view.



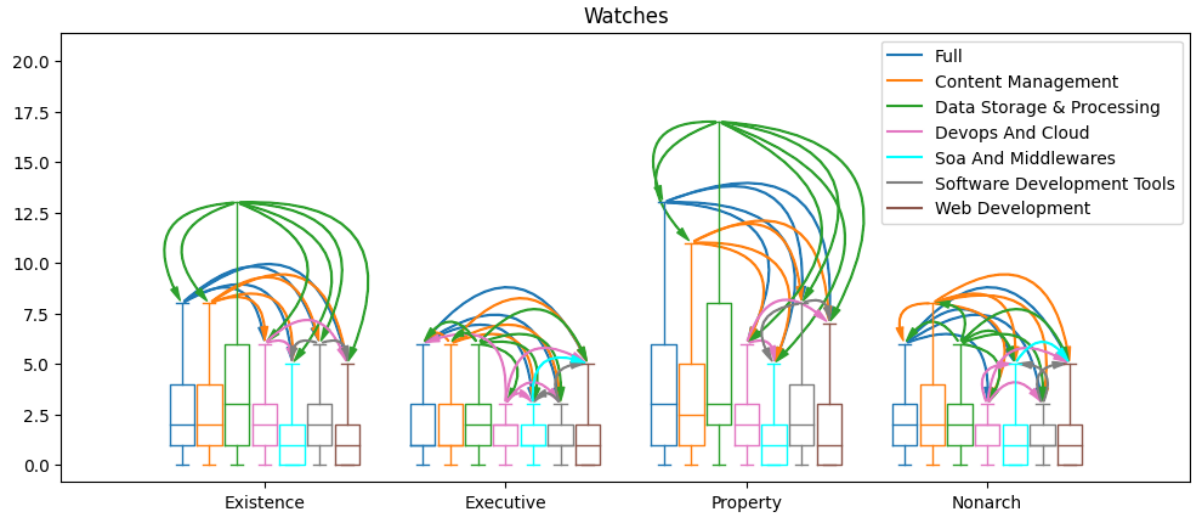
(a) Grouped by decision type first and subgrouped by domain.



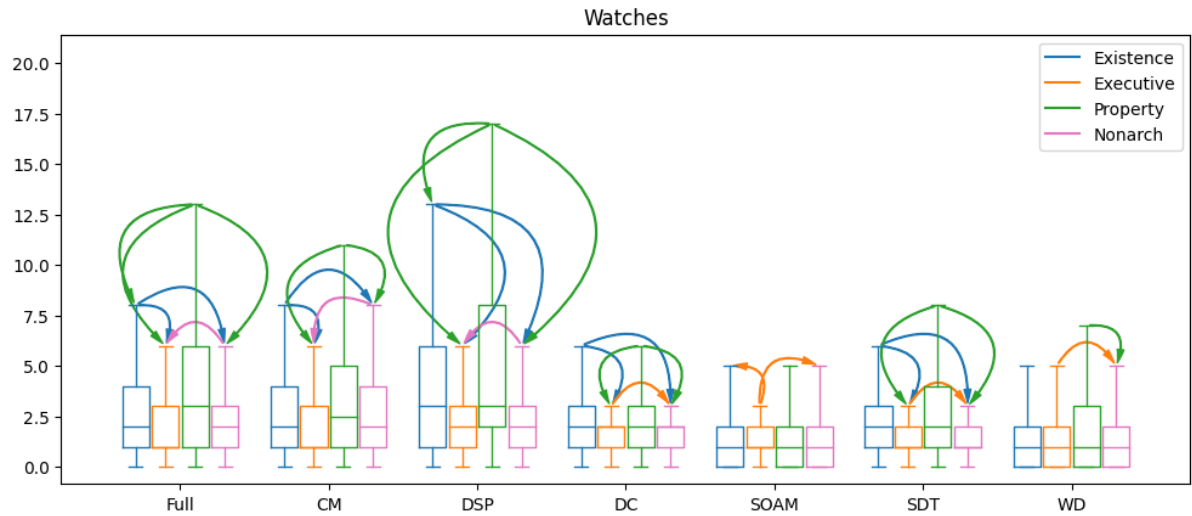
(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 12: Mann-Whitney test on the relations between votes, domain, and decision type contained in the issue, intersected decision view.



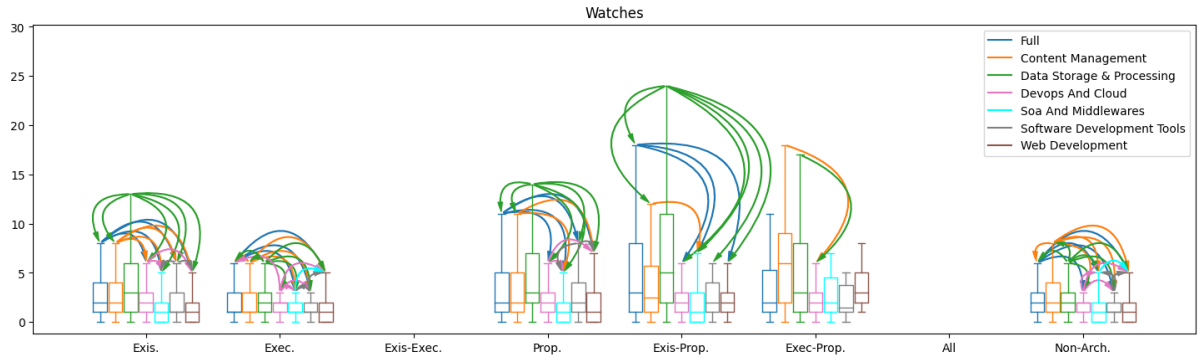


(a) Grouped by decision type first and subgrouped by domain.

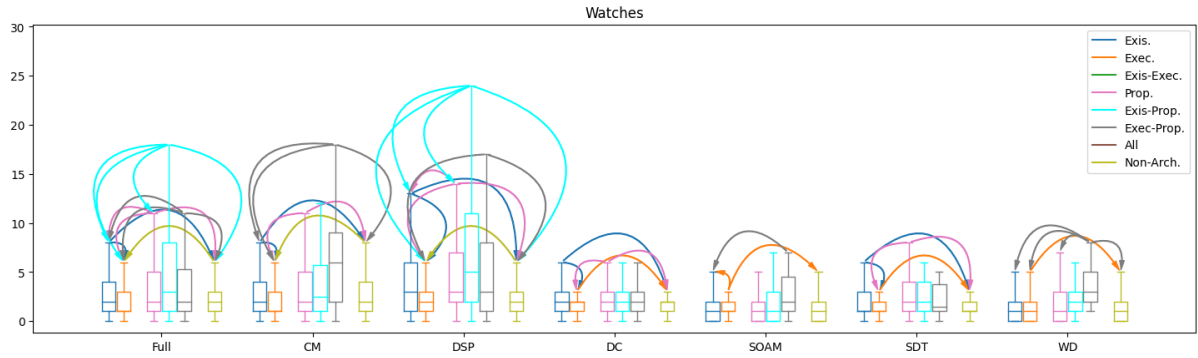


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 13: Mann-Whitney test on the relations between watches, domain, and decision type contained in the issue, simple decision view.



(a) Grouped by decision type first and subgrouped by domain.



(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 14: Mann-Whitney test on the relations between watches, domain, and decision type contained in the issue, intersected decision view.

All Domains	Exis	Exec	Prop	Non-Arch
Independent	0.87		0.93	1.00
Child	1.95	0.83	1.21	
Parent	6.16	1.92	5.65	0.90
CM	Exis	Exec	Prop	Non-Arch
Independent	0.94	0.99	0.96	1.00
Child	3.07	1.47	1.80	0.98
Parent	8.60	2.98	7.54	0.91
DSP	Exis	Exec	Prop	Non-Arch
Independent	0.80	0.98	0.91	1.00
Child	1.76	0.86		1.00
Parent	5.56	2.76	5.18	0.85
DC	Exis	Exec	Prop	Non-Arch
Independent	0.97	1.04	1.02	1.00
Parent	5.46	0.72	2.15	
Child		0.20	0.36	1.07
SOAM	Exis	Exec	Prop	Non-Arch
Independent	0.96	0.96	1.03	1.00
Parent	3.56	1.80	1.78	0.94
Child		1.41	0.28	0.99
SDT	Exis	Exec	Prop	Non-Arch
Parent	4.41	1.58	5.11	0.96
Independent	0.98	1.01		
Child		0.69	0.41	1.01
WD	Exis	Exec	Prop	Non-Arch
Independent	0.95	0.96		1.00
Child		1.59	0.48	0.97
Parent	4.55	1.66	5.49	0.93

Table 8: Chi-squared test results for the relation between the hierarchy issue characteristic and simple decision type contained in the issue, RQ3. [simple](#) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Prop	Non-Arch
Independent	0.87		0.93	1.00
Child	1.95	0.83	1.21	
Parent	6.16	1.92	5.65	0.90

Table 9: Chi-squared test results for the relation between the hierarchy issue characteristic and simple decision type contained in the issue, RQ3. [simple full-domain only](#) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

CM	Exis	Exec	Prop	Non-Arch
Independent	0.94	0.99	0.96	1.00
Child	3.07	1.47	1.80	0.98
Parent	8.60	2.98	7.54	0.91
DSP	Exis	Exec	Prop	Non-Arch
Independent	0.80	0.98	0.91	1.00
Child	1.76	0.86		1.00
Parent	5.56	2.76	5.18	0.85
DC	Exis	Exec	Prop	Non-Arch
Independent	0.97	1.04	1.02	1.00
Parent	5.46	0.72	2.15	
Child		0.20	0.36	1.07
SOAM	Exis	Exec	Prop	Non-Arch
Independent	0.96	0.96	1.03	1.00
Parent	3.56	1.80	1.78	0.94
Child		1.41	0.28	0.99
SDT	Exis	Exec	Prop	Non-Arch
Parent	4.41	1.58	5.11	0.96
Independent	0.98	1.01		
Child		0.69	0.41	1.01
WD	Exis	Exec	Prop	Non-Arch
Independent	0.95	0.96		1.00
Child		1.59	0.48	0.97
Parent	4.55	1.66	5.49	0.93

Table 10: Chi-squared test results for the relation between the hierarchy issue characteristic and simple decision type contained in the issue, RQ3. [simple without full](#) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Bug	0.21	0.34		0.44	0.16			1.02
New Feature	9.39	2.40		7.10	11.25	2.73		0.92
Task	1.41	4.53		1.29				0.91
Epic	12.94	2.07		7.80	9.74			0.91
CM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Bug	0.20	0.33		0.52	0.05			1.01
New Feature	21.40	3.17		11.92	23.68			0.91
Task		13.18		1.90				0.80
Epic	43.50			40.29	96.94			0.83
DSP	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Task	1.43	3.95						0.92
New Feature	7.87	2.35		6.34	9.29	3.21		0.90
Bug	0.24	0.40		0.44	0.18			1.02
Epic	9.53	3.92		7.07	10.94			0.84
DC	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Epic	12.35			6.99	13.93			0.92
Task		2.73						0.96
New Feature	5.79	2.60		5.59	6.98			0.93
Bug	0.12	0.48		0.37	0.04			1.02
SOAM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
New Feature	8.34	2.15		5.41	9.44			0.92
Bug	0.25	0.23		0.47	0.22			1.03
Task		3.10						0.93
Epic	4.54	1.66		8.54				0.95
SDT	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Epic	32.51	3.14		20.44				0.89
Bug	0.13	0.33		0.42	0.26			1.02
Task	2.31	5.73		1.96				0.90
New Feature	8.73	1.99		6.22	10.03			0.96
WD	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
New Feature	10.26	1.95		6.15	11.90			0.94
Task	1.34	4.94		1.99				0.91
Bug	0.21	0.27		0.43	0.08			1.02
Epic	6.41	1.79						0.97

Table 11: Chi-squared test results for the relation between the issue\_type issue characteristic and simple decision type contained in the issue, RQ3. [intersected](#) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Prop	Non-Arch
Bug	0.20	0.34	0.41	1.02
New Feature	9.55	2.39	7.58	0.91
Task	1.36	4.51	1.20	0.91
Epic	12.55	2.05	7.75	0.91

CM	Exis	Exec	Prop	Non-Arch
Bug	0.19	0.33	0.49	1.01
New Feature	21.53	3.17	12.78	0.91
Task		13.11	1.90	0.80
Epic	48.08		43.63	0.81

DSP	Exis	Exec	Prop	Non-Arch
Task	1.35	3.92		0.92
New Feature	8.01	2.34	6.80	0.89
Bug	0.23	0.41	0.40	1.02
Epic	9.64	3.86	7.59	0.84

DC	Exis	Exec	Prop	Non-Arch
Epic	12.41		7.60	0.91
Task		2.73		0.96
New Feature	5.88	2.57	5.44	0.92
Bug	0.11	0.49	0.36	1.02

SOAM	Exis	Exec	Prop	Non-Arch
New Feature	8.39	2.15	5.83	0.91
Bug	0.25	0.24	0.46	1.03
Task		3.09		0.93
Epic	4.19	1.65	6.78	0.95

SDT	Exis	Exec	Prop	Non-Arch
Epic	31.54	3.12	17.79	0.89
Bug	0.14	0.34	0.49	1.02
Task	2.30	5.70	1.77	0.90
New Feature	8.79	1.97	5.90	0.96

WD	Exis	Exec	Prop	Non-Arch
New Feature	10.32	1.95	6.58	0.94
Task	1.35	4.92	1.84	0.91
Bug	0.20	0.27	0.43	1.02
Epic	6.10	1.78		0.97

Table 12: Chi-squared test results for the relation between the issue\_type issue characteristic and simple decision type contained in the issue, RQ3. **simple** (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Prop	Non-Arch
Bug	0.20	0.34	0.41	1.02
New Feature	9.55	2.39	7.58	0.91
Task	1.36	4.51	1.20	0.91
Epic	12.55	2.05	7.75	0.91

Table 13: Chi-squared test results for the relation between the issue\_type issue characteristic and simple decision type contained in the issue, RQ3. **simple full-domain only** (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

CM	Exis	Exec	Prop	Non-Arch
Bug	0.19	0.33	0.49	1.01
New Feature	21.53	3.17	12.78	0.91
Task		13.11	1.90	0.80
Epic	48.08		43.63	0.81
DSP	Exis	Exec	Prop	Non-Arch
Task	1.35	3.92		0.92
New Feature	8.01	2.34	6.80	0.89
Bug	0.23	0.41	0.40	1.02
Epic	9.64	3.86	7.59	0.84
DC	Exis	Exec	Prop	Non-Arch
Epic	12.41		7.60	0.91
Task		2.73		0.96
New Feature	5.88	2.57	5.44	0.92
Bug	0.11	0.49	0.36	1.02
SOAM	Exis	Exec	Prop	Non-Arch
New Feature	8.39	2.15	5.83	0.91
Bug	0.25	0.24	0.46	1.03
Task		3.09		0.93
Epic	4.19	1.65	6.78	0.95
SDT	Exis	Exec	Prop	Non-Arch
Epic	31.54	3.12	17.79	0.89
Bug	0.14	0.34	0.49	1.02
Task	2.30	5.70	1.77	0.90
New Feature	8.79	1.97	5.90	0.96
WD	Exis	Exec	Prop	Non-Arch
New Feature	10.32	1.95	6.58	0.94
Task	1.35	4.92	1.84	0.91
Bug	0.20	0.27	0.43	1.02
Epic	6.10	1.78		0.97

Table 14: Chi-squared test results for the relation between the issue\_type issue characteristic and simple decision type contained in the issue, RQ3. [simple without full](#) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Won'T Fix	1.41	0.43		1.19	1.42	0.31		1.02
Duplicate		0.75		1.21				1.01
Won'T Do	0.80	0.48			0.33			1.03
Fixed	0.98	1.03		1.05	1.08	1.25		1.00
Done	0.92	1.30		0.68	0.54	0.37		0.99
CM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Won'T Fix	1.50	0.36		0.81				1.01
Duplicate	1.24	0.55						1.01
Won'T Do	0.26	0.19		0.32				1.02
Fixed	0.86	1.42		1.20				0.99
Done		2.68						0.96
DSP	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Fixed	0.90	0.93		0.90	0.90			1.00
Won'T Fix	1.97	1.18		2.01	2.19			0.98
Duplicate				1.58	1.54	3.18		0.99
Won'T Do	2.32							0.99
Done	1.21	1.47						0.98
DC	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Done	1.35	0.46						1.05
Won'T Do	1.91	0.67		2.44				1.03
Duplicate		0.83		0.60				1.02
Fixed	0.89	1.20				1.31		0.98
Won'T Fix		0.39						1.06
SOAM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Fixed		1.05						1.00
Won'T Fix	1.45	0.64						1.01
Duplicate					4.03			
Done	0.82	0.96		0.84				1.00
Won'T Do								
SDT	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Done	1.27	1.34		0.59				0.99
Fixed	0.68	0.97				1.99		1.00
Won'T Fix	1.43	0.52						1.02
Duplicate		0.44						1.02
Won'T Do				3.23				
WD	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Fixed		0.58		1.16				1.02
Won'T Fix	2.23	0.31			3.62			1.03
Won'T Do				2.45				
Done	0.76	1.62		0.69				0.96
Duplicate		0.56						1.03

Table 15: Chi-squared test results for the relation between the resolution issue characteristic and simple decision type contained in the issue, RQ3. [intersected](#) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Prop	Non-Arch
Won'T Fix	1.41	0.43	1.20	1.02
Duplicate		0.75	1.22	1.01
Won'T Do	0.75	0.48	0.73	1.03
Fixed		1.03	1.06	1.00
Done	0.89	1.29	0.65	0.99

CM	Exis	Exec	Prop	Non-Arch
Won'T Fix	1.49	0.36		1.01
Duplicate		0.55	0.74	1.01
Won'T Do	0.24	0.20	0.31	1.02
Fixed	0.88	1.42	1.21	0.99
Done		2.67		0.96

DSP	Exis	Exec	Prop	Non-Arch
Fixed	0.90	0.93	0.90	1.00
Won'T Fix	2.00	1.18	2.02	0.98
Duplicate			1.60	0.99
Won'T Do	2.21			0.98
Done	1.16	1.46		0.98

DC	Exis	Exec	Prop	Non-Arch
Done	1.33	0.46		1.05
Won'T Do	1.80	0.67	1.99	1.03
Duplicate		0.83	0.64	1.02
Fixed	0.90	1.20		0.98
Won'T Fix		0.39		1.06

SOAM	Exis	Exec	Prop	Non-Arch
Fixed		1.05		1.00
Won'T Fix	1.50	0.64	1.51	1.01
Duplicate				0.99
Done	0.81	0.96	0.82	1.00
Won'T Do				

SDT	Exis	Exec	Prop	Non-Arch
Done	1.24	1.33	0.56	0.99
Fixed	0.71		1.17	1.00
Won'T Fix	1.40	0.52		1.02
Duplicate		0.45		1.02
Won'T Do				

WD	Exis	Exec	Prop	Non-Arch
Fixed		0.58		1.02
Won'T Fix	2.30	0.31	1.64	1.03
Won'T Do				
Done	0.75	1.62	0.70	0.96
Duplicate		0.56		1.03

Table 16: Chi-squared test results for the relation between the resolution issue characteristic and simple decision type contained in the issue, RQ3. [simple](#) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Prop	Non-Arch
Won'T Fix	1.41	0.43	1.20	1.02
Duplicate		0.75	1.22	1.01
Won'T Do	0.75	0.48	0.73	1.03
Fixed		1.03	1.06	1.00
Done	0.89	1.29	0.65	0.99

Table 17: Chi-squared test results for the relation between the resolution issue characteristic and simple decision type contained in the issue, RQ3. [simple full-domain only](#) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)



CM	Exis	Exec	Prop	Non-Arch
Won'T Fix	1.49	0.36		1.01
Duplicate		0.55	0.74	1.01
Won'T Do	0.24	0.20	0.31	1.02
Fixed	0.88	1.42	1.21	0.99
Done		2.67		0.96
DSP	Exis	Exec	Prop	Non-Arch
Fixed	0.90	0.93	0.90	1.00
Won'T Fix	2.00	1.18	2.02	0.98
Duplicate			1.60	0.99
Won'T Do	2.21			0.98
Done	1.16	1.46		0.98
DC	Exis	Exec	Prop	Non-Arch
Done	1.33	0.46		1.05
Won'T Do	1.80	0.67	1.99	1.03
Duplicate		0.83	0.64	1.02
Fixed	0.90	1.20		0.98
Won'T Fix		0.39		1.06
SOAM	Exis	Exec	Prop	Non-Arch
Fixed		1.05		1.00
Won'T Fix	1.50	0.64	1.51	1.01
Duplicate				0.99
Done	0.81	0.96	0.82	1.00
Won'T Do				
SDT	Exis	Exec	Prop	Non-Arch
Done	1.24	1.33	0.56	0.99
Fixed	0.71		1.17	1.00
Won'T Fix	1.40	0.52		1.02
Duplicate		0.45		1.02
Won'T Do				
WD	Exis	Exec	Prop	Non-Arch
Fixed		0.58		1.02
Won'T Fix	2.30	0.31	1.64	1.03
Won'T Do				
Done	0.75	1.62	0.70	0.96
Duplicate		0.56		1.03

Table 18: Chi-squared test results for the relation between the resolution issue characteristic and simple decision type contained in the issue, RQ3. [simple without full](#) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Closed	0.75	1.04		0.72	0.59			1.00
Open	1.97	0.59		2.21	2.58			1.00
Resolved	1.24	1.07		1.24	1.39			0.99
In Progress	4.14			2.10	6.19			0.97
CM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Closed	0.83	0.87		0.75	0.73			1.00
Open	2.89	1.15		2.99	3.95			0.98
Resolved	1.42	2.17		2.10				0.97
In Progress								0.98
DSP	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Resolved	0.95			0.90				1.00
Open	1.50	0.79		1.62	1.66			1.00
In Progress	2.79	1.51			3.77			0.96
Closed	0.83	1.09		0.85	0.78	0.62		
DC	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Closed	0.82	0.99		0.80	0.73			1.00
In Progress	8.30	0.23		2.62	15.16			1.02
Resolved	1.52	1.60		1.30				0.94
Open	1.87	0.28		2.99	2.88			1.05
SOAM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Resolved		1.29						0.99
Closed	0.92	0.87		0.89	0.69			1.01
Open	1.63	0.68		1.77	2.78			1.01
In Progress		2.38						0.93
SDT	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Closed	0.82	1.04		0.93	0.81			1.00
Open	2.27	0.60		1.55	2.73			1.01
Resolved	1.73							
In Progress								
WD	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Closed		1.09		0.91				1.00
Resolved	0.83	0.90						1.01
Open	2.05	0.48		1.96	2.52			1.02
In Progress		2.23				76.75		0.92

Table 19: Chi-squared test results for the relation between the status issue characteristic and simple decision type contained in the issue, RQ3. [intersected](#) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Prop	Non-Arch
Closed	0.73	1.04	0.70	1.00
Open	2.03	0.60	2.24	1.00
Resolved	1.25	1.07	1.26	0.99
In Progress	4.36		2.74	0.97
CM	Exis	Exec	Prop	Non-Arch
Closed	0.82	0.87	0.75	1.00
Open	2.97	1.16	3.05	0.98
Resolved	1.44	2.17	2.06	0.97
In Progress				0.98
DSP	Exis	Exec	Prop	Non-Arch
Resolved	0.94		0.91	1.00
Open	1.52	0.79	1.62	1.00
In Progress	2.93	1.50	1.92	0.95
Closed	0.82	1.09	0.83	
DC	Exis	Exec	Prop	Non-Arch
Closed	0.82	0.99	0.82	1.00
In Progress	8.75	0.22	3.92	
Resolved	1.50	1.60		0.94
Open	1.94	0.28	2.80	1.05
SOAM	Exis	Exec	Prop	Non-Arch
Resolved		1.29		0.99
Closed	0.90	0.87	0.88	1.01
Open	1.71	0.68	1.89	1.00
In Progress		2.37		0.93
SDT	Exis	Exec	Prop	Non-Arch
Closed	0.82	1.04	0.93	1.00
Open	2.30	0.60	1.63	1.01
Resolved	1.69			
In Progress			4.95	
WD	Exis	Exec	Prop	Non-Arch
Closed	0.94	1.09	0.90	1.00
Resolved	0.83	0.90		1.01
Open	2.08	0.48	2.05	1.02
In Progress		2.35		0.91

Table 20: Chi-squared test results for the relation between the status issue characteristic and simple decision type contained in the issue, RQ3. [simple](#) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Prop	Non-Arch
Closed	0.73	1.04	0.70	1.00
Open	2.03	0.60	2.24	1.00
Resolved	1.25	1.07	1.26	0.99
In Progress	4.36		2.74	0.97

Table 21: Chi-squared test results for the relation between the status issue characteristic and simple decision type contained in the issue, RQ3. [simple full-domain only](#) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

CM	Exis	Exec	Prop	Non-Arch
Closed	0.82	0.87	0.75	1.00
Open	2.97	1.16	3.05	0.98
Resolved	1.44	2.17	2.06	0.97
In Progress				0.98
DSP	Exis	Exec	Prop	Non-Arch
Resolved	0.94		0.91	1.00
Open	1.52	0.79	1.62	1.00
In Progress	2.93	1.50	1.92	0.95
Closed	0.82	1.09	0.83	
DC	Exis	Exec	Prop	Non-Arch
Closed	0.82	0.99	0.82	1.00
In Progress	8.75	0.22	3.92	
Resolved	1.50	1.60		0.94
Open	1.94	0.28	2.80	1.05
SOAM	Exis	Exec	Prop	Non-Arch
Resolved		1.29		0.99
Closed	0.90	0.87	0.88	1.01
Open	1.71	0.68	1.89	1.00
In Progress		2.37		0.93
SDT	Exis	Exec	Prop	Non-Arch
Closed	0.82	1.04	0.93	1.00
Open	2.30	0.60	1.63	1.01
Resolved	1.69			
In Progress			4.95	
WD	Exis	Exec	Prop	Non-Arch
Closed	0.94	1.09	0.90	1.00
Resolved	0.83	0.90		1.01
Open	2.08	0.48	2.05	1.02
In Progress		2.35		0.91

Table 22: Chi-squared test results for the relation between the status issue characteristic and simple decision type contained in the issue, RQ3. [simple without full](#) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)