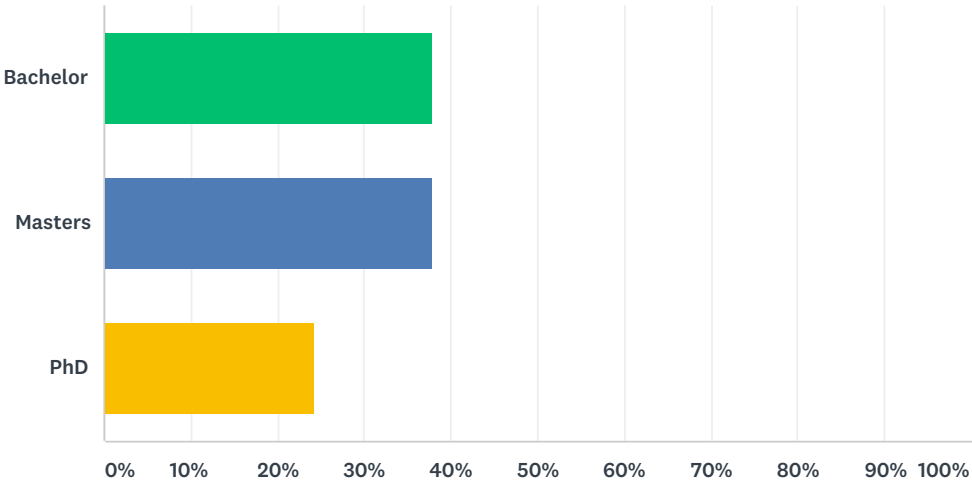


Q1 Educational background

Answered: 37 Skipped: 4

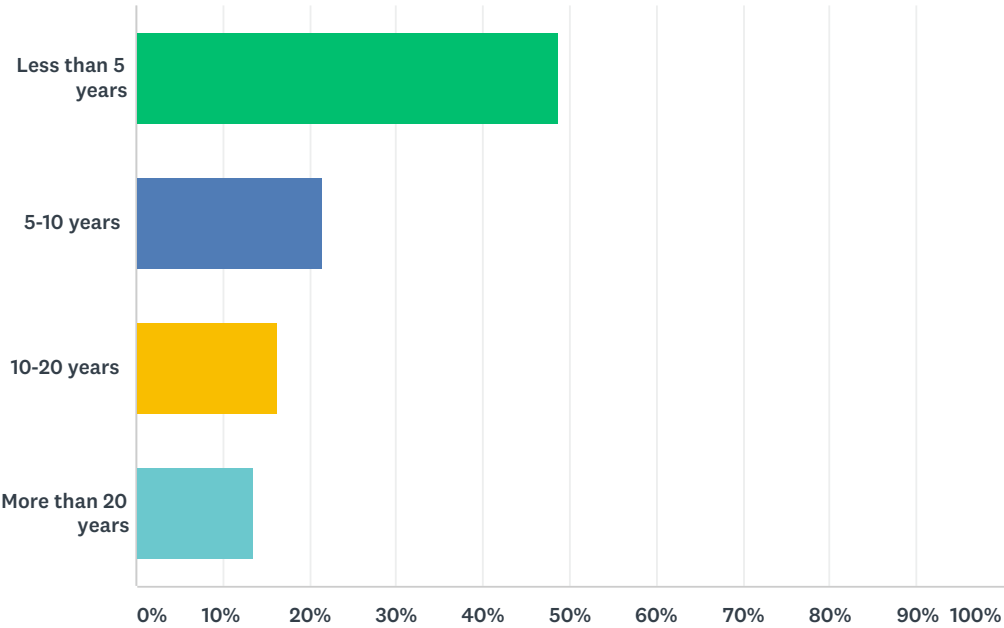


ANSWER CHOICES		RESPONSES	
Bachelor		37.84%	14
Masters		37.84%	14
PhD		24.32%	9
TOTAL			37

#	OTHER (PLEASE SPECIFY)	DATE
1	College	3/7/2018 9:20 PM
2	Certified Nursing Assistant Certification	3/7/2018 9:10 PM
3	Some college.	3/7/2018 7:39 PM

Q2 Industrial Experience

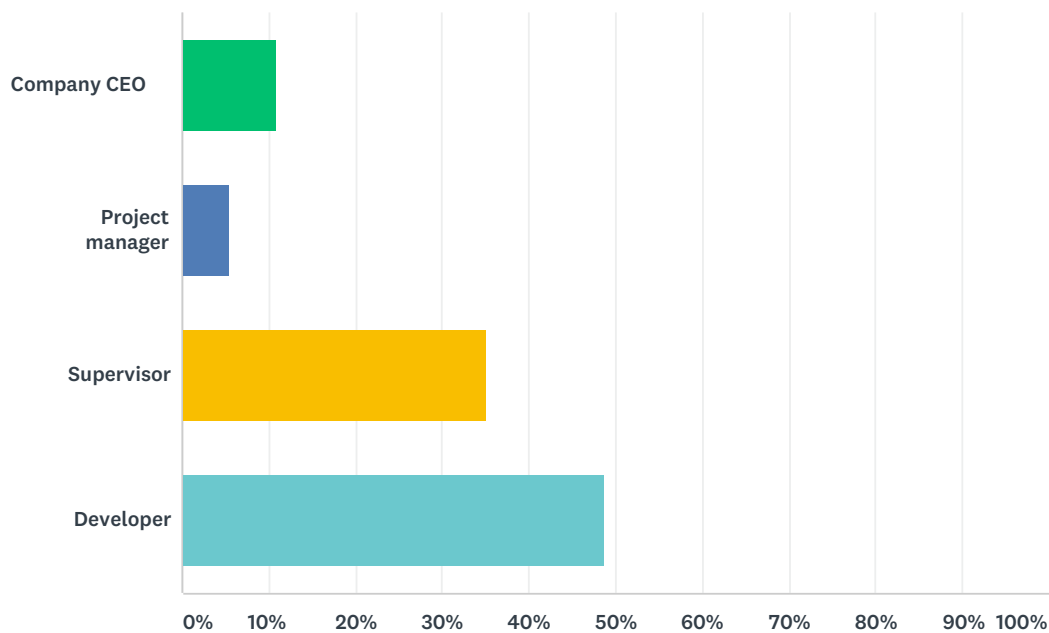
Answered: 37 Skipped: 4



ANSWER CHOICES		RESPONSES	
Less than 5 years		48.65%	18
5-10 years		21.62%	8
10-20 years		16.22%	6
More than 20 years		13.51%	5
TOTAL			37

Q3 Occupational role

Answered: 37 Skipped: 4

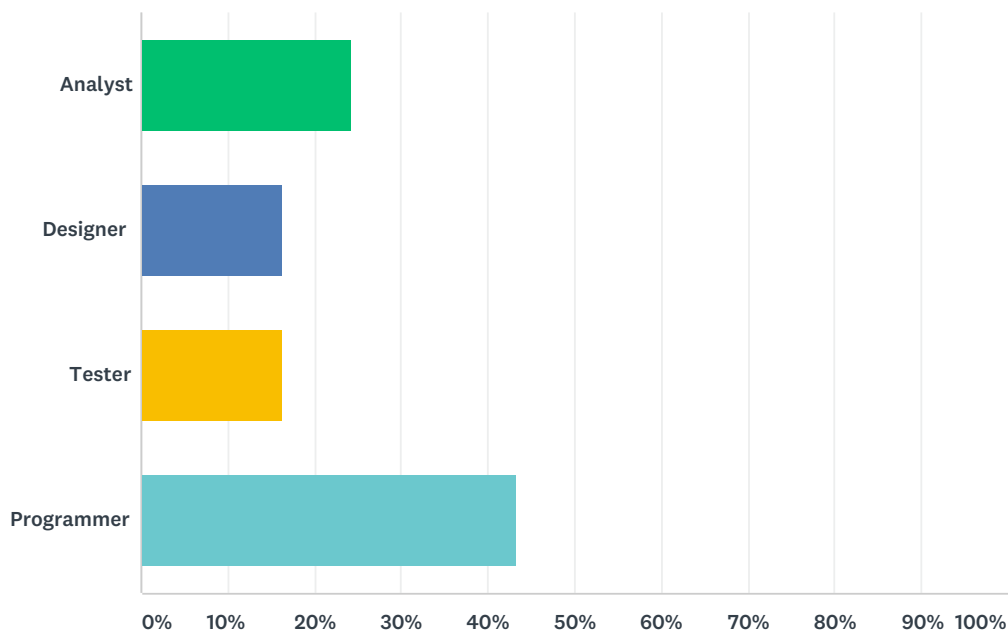


ANSWER CHOICES	RESPONSES
Company CEO	10.81% 4
Project manager	5.41% 2
Supervisor	35.14% 13
Developer	48.65% 18
TOTAL	37

#	OTHER (PLEASE SPECIFY)	DATE
1	Instructor	4/2/2018 1:59 AM
2	quality assurance	3/25/2018 5:10 PM
3	QA	3/25/2018 4:07 AM
4	Quality assurance specialist	3/18/2018 2:30 PM
5	Laborer	3/7/2018 9:10 PM
6	Administrator	3/7/2018 8:34 PM
7	Unemployed.	3/7/2018 7:39 PM

Q4 Domain of expertise

Answered: 37 Skipped: 4

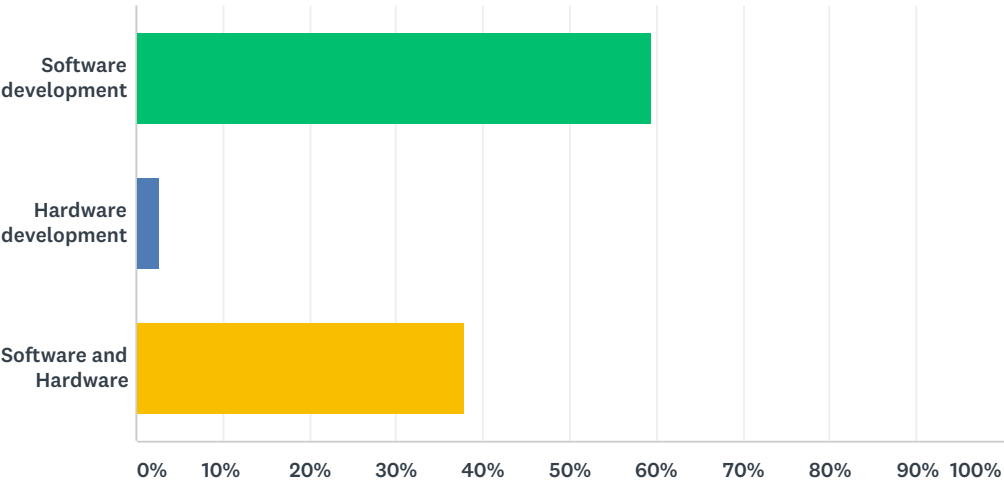


ANSWER CHOICES	RESPONSES
Analyst	24.32% 9
Designer	16.22% 6
Tester	16.22% 6
Programmer	43.24% 16
TOTAL	37

#	OTHER (PLEASE SPECIFY)	DATE
1	Project Management	4/4/2018 2:26 AM
2	Teaching	4/2/2018 1:59 AM
3	Operations	4/1/2018 2:44 PM
4	All of the above - the survey won't let me answer here with out selecting one of the choices above - which are not valid in themselves	3/24/2018 10:44 PM
5	Full stack developemnt	3/20/2018 8:17 PM
6	Data Science	3/19/2018 7:28 AM
7	Customer service/ poultry	3/7/2018 9:10 PM
8	Administration	3/7/2018 8:34 PM

Q5 Company domain

Answered: 37 Skipped: 4



ANSWER CHOICES		RESPONSES	
Software development		59.46%	22
Hardware development		2.70%	1
Software and Hardware		37.84%	14
TOTAL			37

#	OTHER (PLEASE SPECIFY)	DATE
1	University	4/2/2018 1:59 AM
2	Construction	4/1/2018 2:44 PM

Q6 Company location (country)

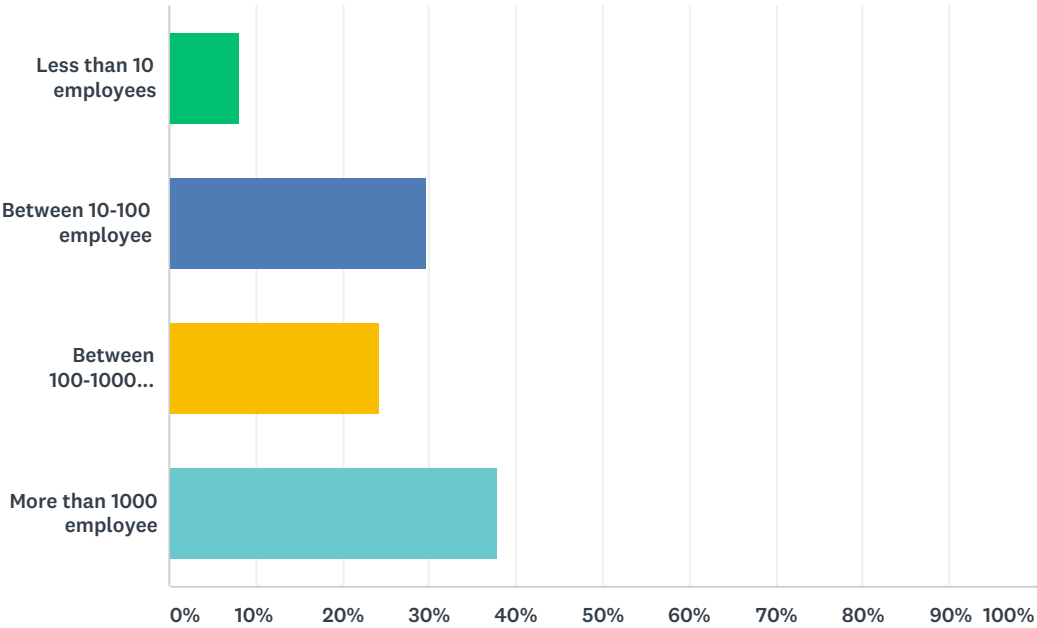
Answered: 37 Skipped: 4

#	RESPONSES	DATE
1	China	4/10/2018 11:33 PM
2	Canada	4/4/2018 9:18 PM
3	Canada	4/4/2018 2:26 AM
4	Jordan	4/2/2018 1:59 AM
5	Jordan	4/1/2018 4:06 PM
6	UAE	4/1/2018 2:44 PM
7	Canada	3/28/2018 4:06 AM
8	Saudi arabia	3/26/2018 12:53 PM
9	Canada	3/26/2018 2:56 AM
10	India, Canada	3/26/2018 12:50 AM
11	Canada	3/25/2018 10:16 PM
12	jordan	3/25/2018 5:10 PM
13	Jordan	3/25/2018 4:07 AM
14	Canada	3/24/2018 11:43 PM
15	Canada	3/24/2018 10:44 PM
16	Canada	3/24/2018 10:21 PM
17	Canada	3/22/2018 7:02 AM
18	Canada	3/21/2018 10:52 PM
19	Saudi Arabia	3/20/2018 8:17 PM
20	Ottawa	3/20/2018 11:04 AM
21	Canada	3/20/2018 7:50 AM
22	Ottawa, Canada	3/19/2018 7:28 AM
23	Canada	3/18/2018 2:30 PM
24	Canada	3/18/2018 3:48 AM
25	USA	3/17/2018 3:18 AM
26	Canada	3/17/2018 2:15 AM
27	canada	3/16/2018 10:35 PM
28	Canada	3/16/2018 9:33 PM
29	Jordan	3/15/2018 1:39 PM
30	USA	3/14/2018 6:48 PM
31	UK	3/13/2018 9:12 PM
32	italy	3/8/2018 12:24 AM
33	Usa	3/7/2018 9:20 PM
34	United States of America	3/7/2018 9:10 PM
35	New Jersey	3/7/2018 9:02 PM

36	The Bahamas	3/7/2018 8:34 PM
37	United States.	3/7/2018 7:39 PM

Q7 Company size

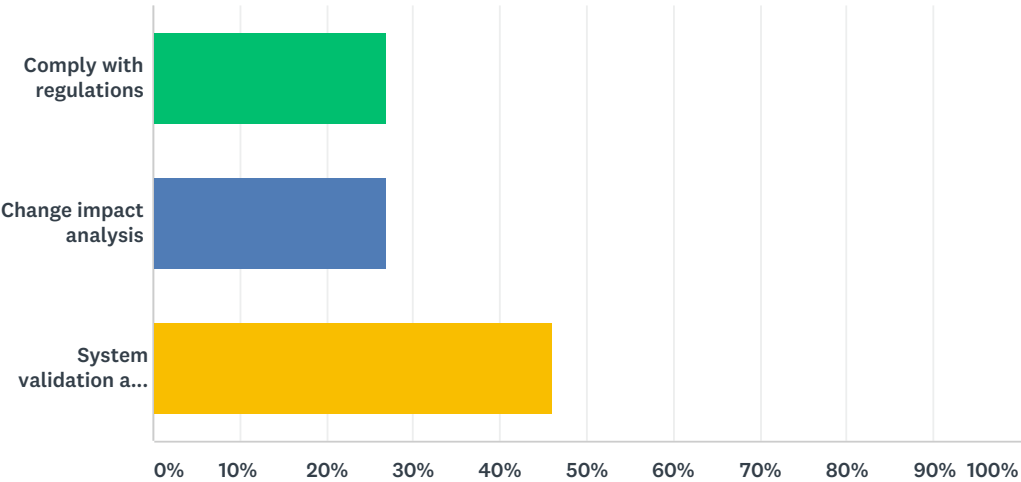
Answered: 37 Skipped: 4



ANSWER CHOICES		RESPONSES	
Less than 10 employees		8.11%	3
Between 10-100 employee		29.73%	11
Between 100-1000 employee		24.32%	9
More than 1000 employee		37.84%	14
TOTAL			37

Q8 Why do you apply traceability in your company

Answered: 37 Skipped: 4

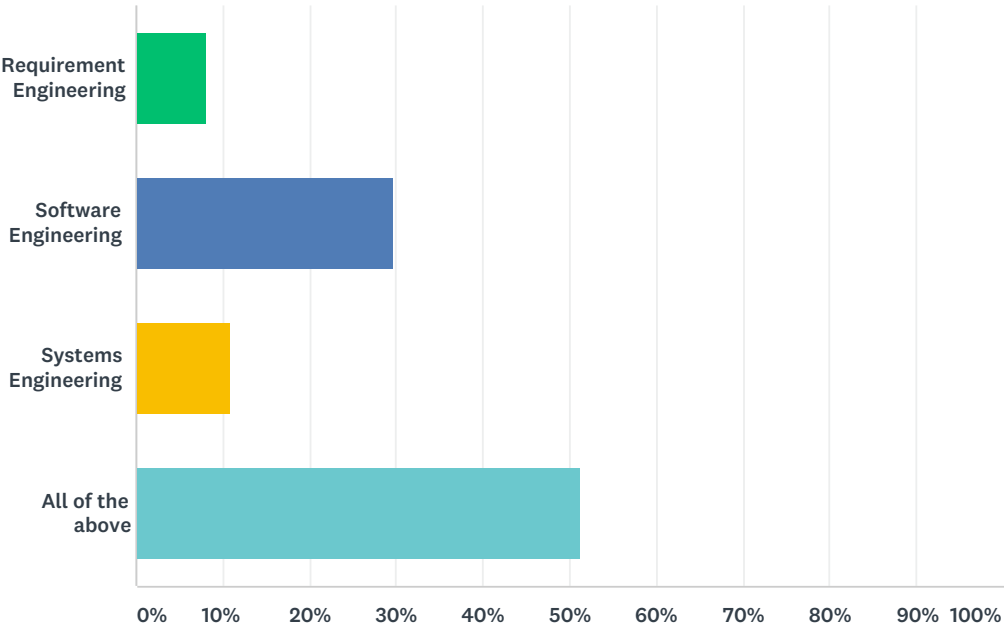


ANSWER CHOICES		RESPONSES	
Comply with regulations		27.03%	10
Change impact analysis		27.03%	10
System validation and verification		45.95%	17
TOTAL			37

#	OTHER (PLEASE SPECIFY)	DATE
1	All of the above - the survey won't let me answer here with out selecting one of the choices above - which are not valid in themselves	3/24/2018 10:44 PM
2	All of these	3/17/2018 2:15 AM

Q9 In which domain you adopt traceability

Answered: 37 Skipped: 4



ANSWER CHOICES	RESPONSES	
Requirement Engineering	8.11%	3
Software Engineering	29.73%	11
Systems Engineering	10.81%	4
All of the above	51.35%	19
TOTAL		37

Q10 Please specify the types of artifacts that you trace

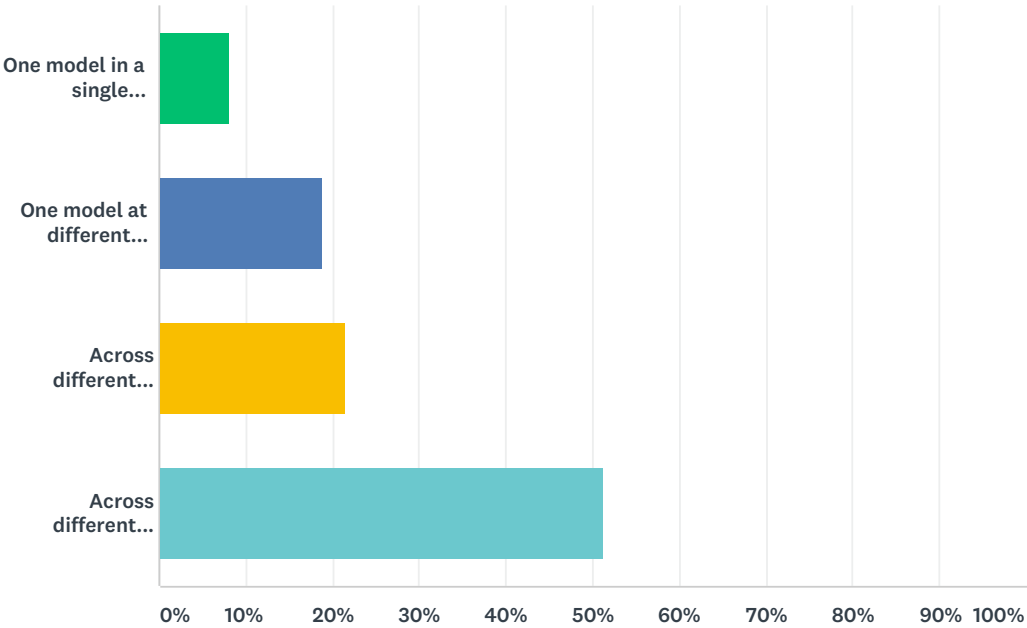
Answered: 37 Skipped: 4

#	RESPONSES	DATE
1	data flow	4/10/2018 11:33 PM
2	Rally	4/4/2018 9:18 PM
3	Design, Development and Implementation , I would call them phases though	4/4/2018 2:26 AM
4	Des8gn and code	4/2/2018 1:59 AM
5	Small business	4/1/2018 4:06 PM
6	NA	4/1/2018 2:44 PM
7	Software for real-time data acquisition and monitoring of Well drilling	3/28/2018 4:06 AM
8	Verification and analysis	3/26/2018 12:53 PM
9	NA	3/26/2018 2:56 AM
10	Software Engineering Requirements	3/26/2018 12:50 AM
11	Requirements and progress of projects	3/25/2018 10:16 PM
12	Surveys products , mobile application , BI reports, services	3/25/2018 5:10 PM
13	Use cases	3/25/2018 4:07 AM
14	Employee Activity, Network	3/24/2018 11:43 PM
15	Customer requirements, functional and non-functional. Preferably these are traceable to both code and testcases, but sometimes that is difficult (e.g. a requirement that affects many products within a solution). Depending on the size and realm of a project there could be buisness requirements, high level design documents, detailed design documents, code, test strategies and testcases, and versions of them all. Also, meeting minutes, sometimes emails and shared discussions (Some groups do everything by chat (e.g. slack) so all decisions are captured implicitly)	3/24/2018 10:44 PM
16	feature to develop	3/24/2018 10:21 PM
17	Performance	3/22/2018 7:02 AM
18	Requirements, Use cases, test cases	3/21/2018 10:52 PM
19	Requirments and design	3/20/2018 8:17 PM
20	Developing Features, Bug Tracking, Test cases, Documentation	3/20/2018 11:04 AM
21	Test cases	3/20/2018 7:50 AM
22	Big Data Platform Performance, Efficiency, and Utilization	3/19/2018 7:28 AM
23	Coverage	3/18/2018 2:30 PM
24	Requirements, implementation	3/18/2018 3:48 AM
25	Models	3/17/2018 3:18 AM
26	Services (service monitoring), Personal identifiable information, Any code paths that require extracted information for debugging	3/17/2018 2:15 AM
27	system design,system hardware,system software	3/16/2018 10:35 PM
28	N/A	3/16/2018 9:33 PM
29	Deliverable documentation, SW components, Tests	3/15/2018 1:39 PM
30	Requirements, architecture, test cases, verification items	3/14/2018 6:48 PM
31	LOS	3/13/2018 9:12 PM

32	requirements, design choices, verification procedures	3/8/2018 12:24 AM
33	Programme	3/7/2018 9:20 PM
34	Safety of products	3/7/2018 9:10 PM
35	I	3/7/2018 9:02 PM
36	Application	3/7/2018 8:34 PM
37	N/A.	3/7/2018 7:39 PM

Q11 Where do the traced artifacts exist

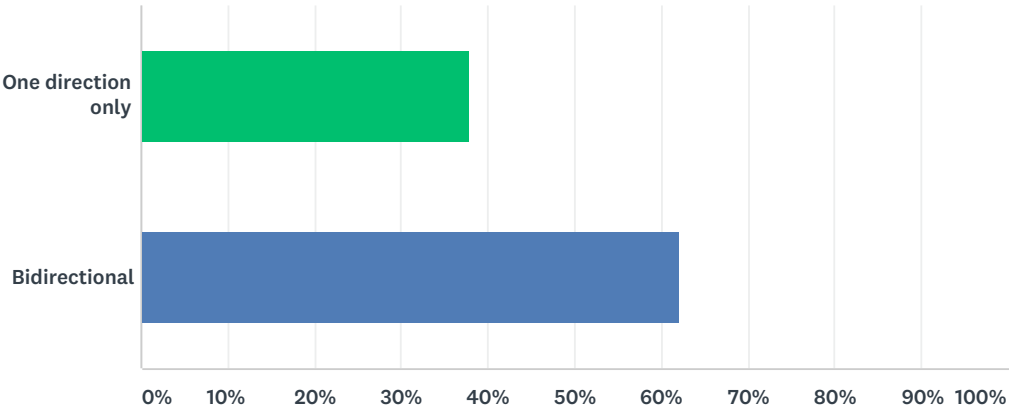
Answered: 37 Skipped: 4



ANSWER CHOICES	RESPONSES	
One model in a single phase/level	8.11%	3
One model at different phases/levels	18.92%	7
Across different models and at the same phase/level	21.62%	8
Across different models and at different phases/levels	51.35%	19
TOTAL		37

Q12 Please specify the direction in which you trace artifacts

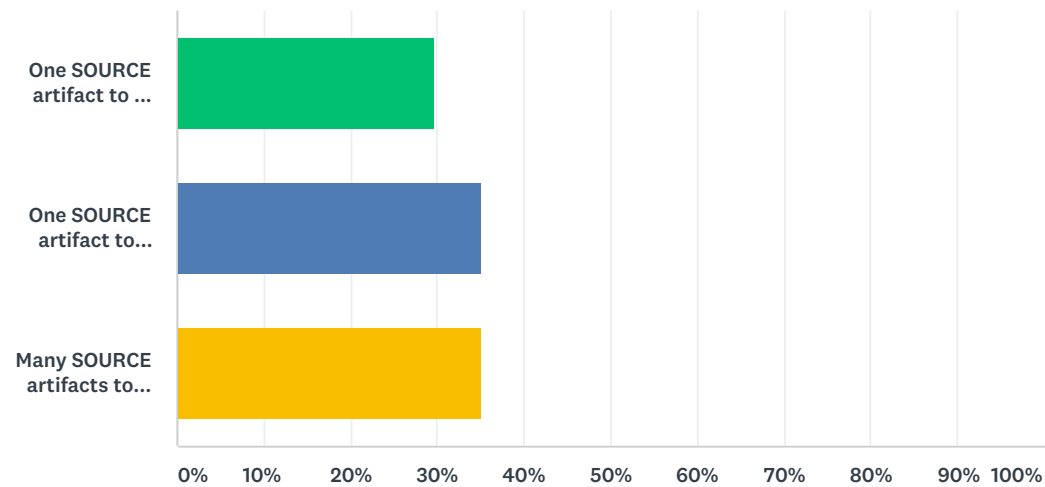
Answered: 37 Skipped: 4



ANSWER CHOICES		RESPONSES	
One direction only		37.84%	14
Bidirectional		62.16%	23
TOTAL			37

Q13 Please specify the cardinality of the traced artifacts

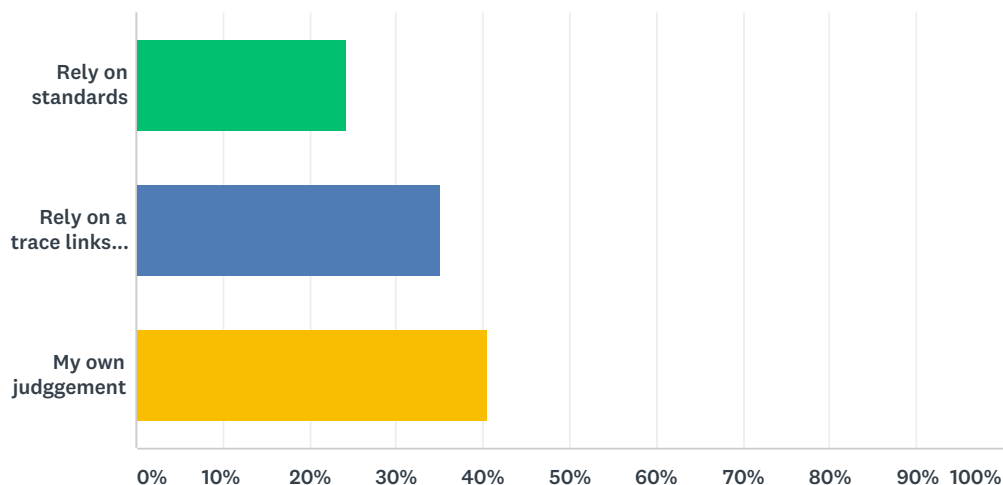
Answered: 37 Skipped: 4



ANSWER CHOICES		RESPONSES	
One SOURCE artifact to one TARGET artifact		29.73%	11
One SOURCE artifact to many TARGET artifacts		35.14%	13
Many SOURCE artifacts to one TARGET artifact		35.14%	13
TOTAL			37

Q14 How do you identify the trace links between the traced artifacts

Answered: 37 Skipped: 4



ANSWER CHOICES	RESPONSES
Rely on standards	24.32% 9
Rely on a trace links taxonomy	35.14% 13
My own judgement	40.54% 15
TOTAL	37

#	OTHER (PLEASE SPECIFY)	DATE
1	Standards and my judgement	3/26/2018 12:53 PM
2	All of the above... maybe not standards	3/24/2018 10:44 PM
3	Logs are traced from one source to another, using different logging systems	3/17/2018 2:15 AM
4	some kind of log	3/16/2018 10:35 PM
5	N/A	3/16/2018 9:33 PM

Q15 Please specify the name of the traceability tool(s) that you use at work

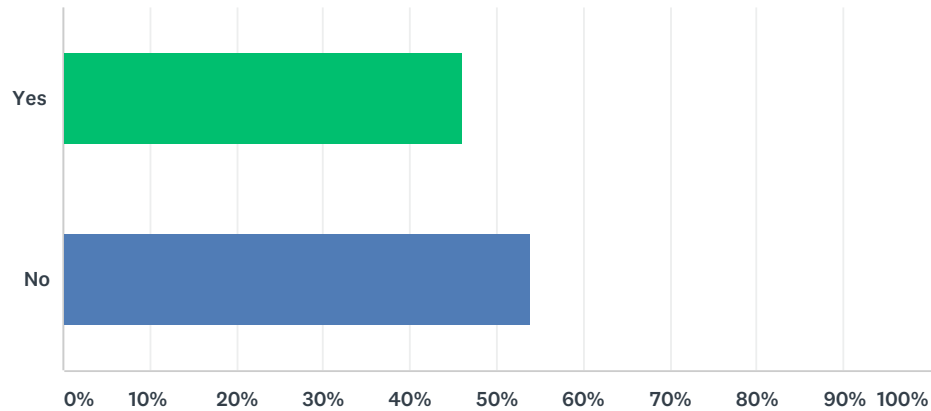
Answered: 37 Skipped: 4

#	RESPONSES	DATE
1	pycharm , vim , shell	4/10/2018 11:33 PM
2	Rally	4/4/2018 9:18 PM
3	NA	4/4/2018 2:26 AM
4	Excel or IBM requisite pro	4/2/2018 1:59 AM
5	Traceability	4/1/2018 4:06 PM
6	NA	4/1/2018 2:44 PM
7	IBM Rational DOORS	3/28/2018 4:06 AM
8	Emails,bug logging tools,documents	3/26/2018 12:53 PM
9	NA	3/26/2018 2:56 AM
10	Sparx sustems Enterprise Architect	3/26/2018 12:50 AM
11	Can't disclose from company perspective. Sorry	3/25/2018 10:16 PM
12	TFS	3/25/2018 5:10 PM
13	RTM, requirements traceability matrix, Orcanos	3/25/2018 4:07 AM
14	Orcanos ALM	3/24/2018 11:43 PM
15	DOORS, Excel, Word, Web based/Wiki, Modeling tools (UML, FSMs), and even text in the code/tests, emails...	3/24/2018 10:44 PM
16	standard for Nortel	3/24/2018 10:21 PM
17	Try to get	3/22/2018 7:02 AM
18	N/A, not at work but previous school projects	3/21/2018 10:52 PM
19	IBM Rational	3/20/2018 8:17 PM
20	Jira	3/20/2018 11:04 AM
21	Manual	3/20/2018 7:50 AM
22	Spark Yarn Big Data Cluster Manger	3/19/2018 7:28 AM
23	Can't specify	3/18/2018 2:30 PM
24	JIRA, SVN	3/18/2018 3:48 AM
25	In house tool	3/17/2018 3:18 AM
26	Splunk, datadog	3/17/2018 2:15 AM
27	own configuration management system	3/16/2018 10:35 PM
28	N/A	3/16/2018 9:33 PM
29	Eclipse	3/15/2018 1:39 PM
30	In house tool	3/14/2018 6:48 PM
31	my own	3/13/2018 9:12 PM
32	doors, enterprise architect, artisan studio	3/8/2018 12:24 AM
33	Microsoft	3/7/2018 9:20 PM

34	Paperwork reports to go to government employees	3/7/2018 9:10 PM
35	2	3/7/2018 9:02 PM
36	D+H	3/7/2018 8:34 PM
37	N/A.	3/7/2018 7:39 PM

Q16 Is the tool platform dependent (e.g., works only under certain OS)

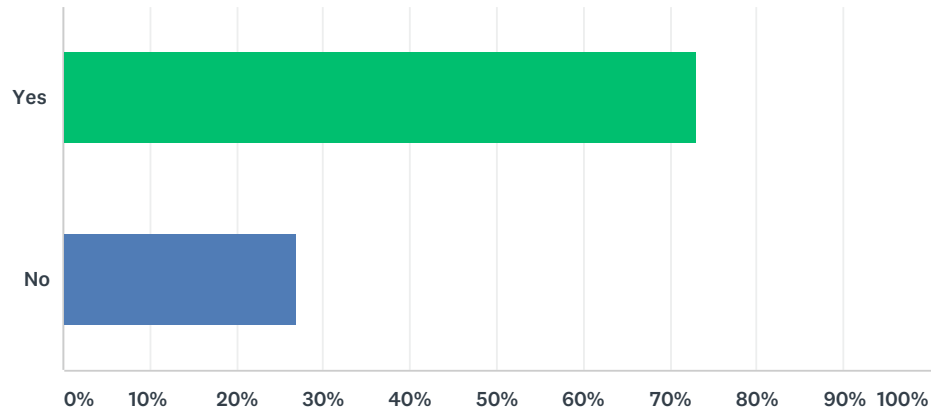
Answered: 37 Skipped: 4



ANSWER CHOICES		RESPONSES	
Yes		45.95%	17
No		54.05%	20
TOTAL			37

Q17 Can the tool allow you to specify some constraints on a certain trace link or an artifact

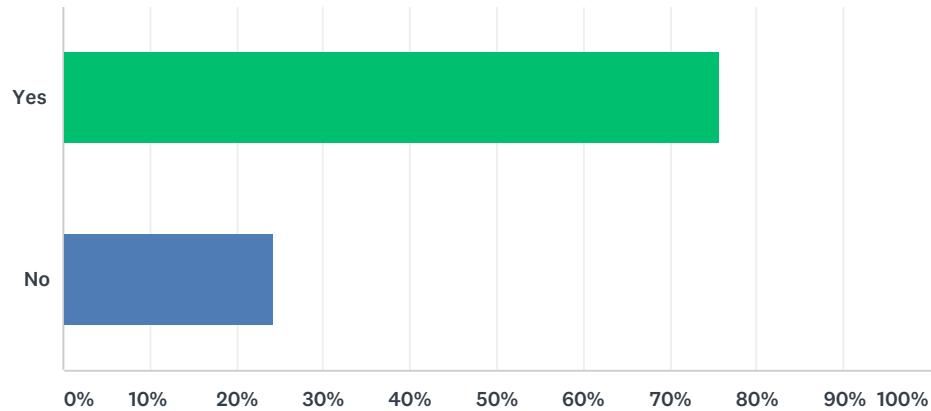
Answered: 37 Skipped: 4



ANSWER CHOICES		RESPONSES	
Yes		72.97%	27
No		27.03%	10
TOTAL			37

Q18 Can the tool allows you to specify some information about a trace link such as name, type, etc.

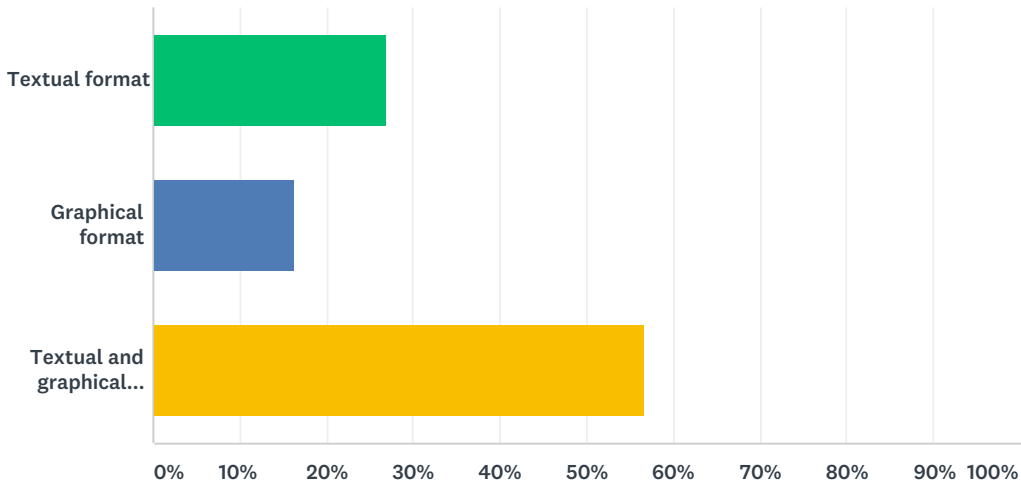
Answered: 37 Skipped: 4



ANSWER CHOICES		RESPONSES	
Yes		75.68%	28
No		24.32%	9
TOTAL			37

Q19 Can the tool allows you to visulize traceability information in

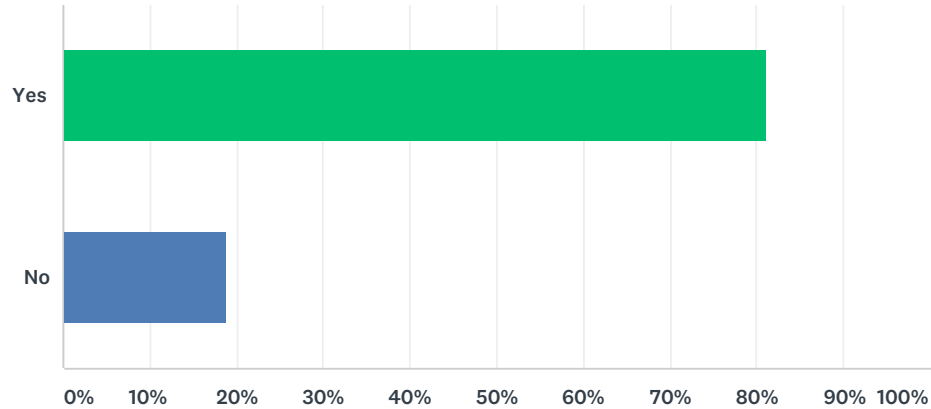
Answered: 37 Skipped: 4



ANSWER CHOICES		RESPONSES	
Textual format		27.03%	10
Graphical format		16.22%	6
Textual and graphical formats		56.76%	21
TOTAL			37

Q20 Can the tool allows you to store information about an artificat such as type, version, etc.

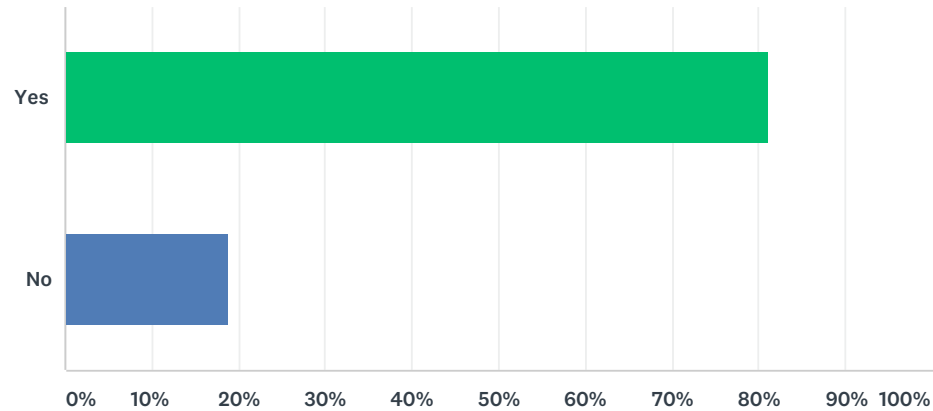
Answered: 37 Skipped: 4



ANSWER CHOICES	RESPONSES	
Yes	81.08%	30
No	18.92%	7
TOTAL		37

Q21 Can the tool allows you to specify which artifact is a SOURCE and which artifact is a TARGET

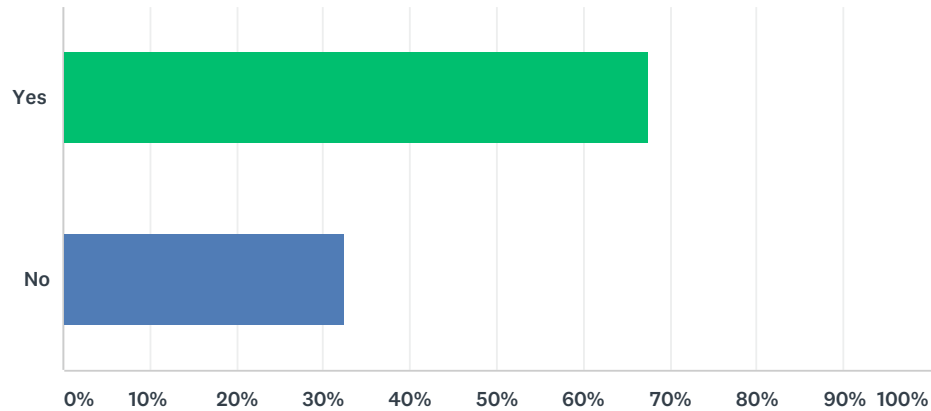
Answered: 37 Skipped: 4



ANSWER CHOICES		RESPONSES	
Yes		81.08%	30
No		18.92%	7
TOTAL			37

Q22 Can the tool allows you to specify the SOURCE and TARGET artifacts at different levels of granularity

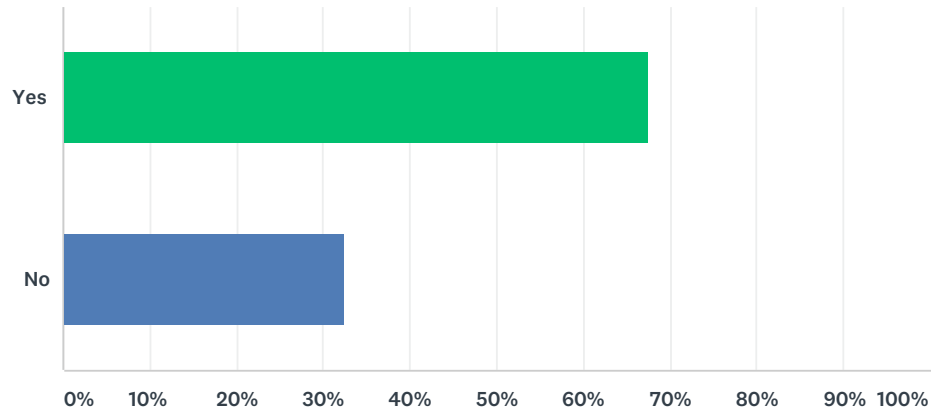
Answered: 37 Skipped: 4



ANSWER CHOICES		RESPONSES	
Yes		67.57%	25
No		32.43%	12
TOTAL			37

Q23 Can the tool be customized to add more traceability features if needed

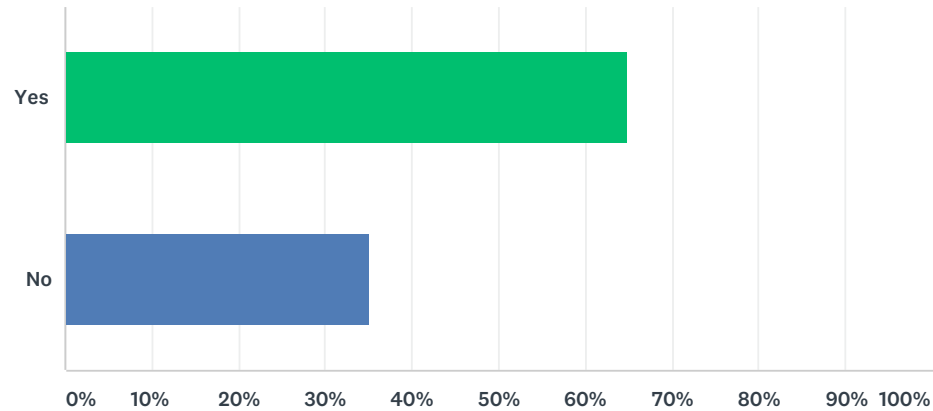
Answered: 37 Skipped: 4



ANSWER CHOICES		RESPONSES	
Yes		67.57%	25
No		32.43%	12
TOTAL			37

Q24 Would you be interested in participating of testing a new traceability model that might offers those features

Answered: 37 Skipped: 4



ANSWER CHOICES		RESPONSES	
Yes		64.86%	24
No		35.14%	13
TOTAL			37

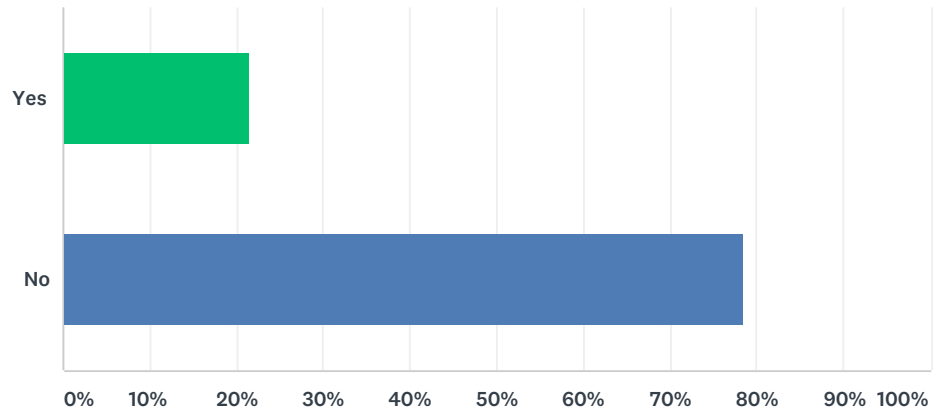
Q25 Please write any comment that you would like to add about this survey

Answered: 11 Skipped: 30

#	RESPONSES	DATE
1	None	4/4/2018 2:26 AM
2	Tools are comprehensive but doesn't cover the whole testing and development process there is a necessity for meetings for confirmation process .	3/26/2018 12:53 PM
3	Good project	3/26/2018 2:56 AM
4	Good	3/25/2018 10:16 PM
5	The survey could use some work. There is too many academic terms that people in industry would not necessarily recognize. Even words like "artifact" may not commonly used - not everyone is a process person. For someone like myself with decades of experience, I have had too many roles to fit nicely in your questions. You are also missing roles (if that is the right word) like Testers, QA, UX people, product management (who manage the requirements), etc. While you know "QA" person is not a tester, most of the software industry doesn't. Questions 3&4 are not orthogonal. It would also depend on what processes/methodologies respondents use (if any). ISOxxxx, DODxxxx, Scrum, Kanban, and many others, have a variety of traceability requirements. A lot of development projects will also say they follow a methodology, when they really are not. I am guessing(?) you may not want to get into that level of complexity - but for a PhD to be worthwhile, I would think you have to. There are grammar errors e.g. "Can the tool allows" and the introduction page is not easy to read ...in many ways. I have terrible grammar, so I know there are people who cannot read a document with English errors. These people are often involved with managing processes ...and therefore traceability. Finally, your survey is telling me some of my answered questions need answers! I'm just going to keep pushing buttons until SurveyMonkey lets me submit, which may lower the quality of my answers... While I am sure you will get data, I am not sure you will get realistic information about what is *really* happening in Industry. Kevin Burr	3/24/2018 10:44 PM
6	No comment s	3/22/2018 7:02 AM
7	I don't remember exactly which tool we used.	3/21/2018 10:52 PM
8	Some data are confidential so can specify every detail.	3/18/2018 2:30 PM
9	We are not using any specific tool for software traceability that I am aware of. Unfortunately i have selected random selections for most questions because i am not able to complete without filling all answer and i didn't want to close browser mid-way.	3/16/2018 9:33 PM
10	It takes the trustworthiness and dependability of employees to make sure everything goes smoothly as well as the responsibility of managers, supervisors etc to safeguard products for everyone	3/7/2018 9:10 PM
11	N/A.	3/7/2018 7:39 PM

Q26 Would you like to withdraw from this survey

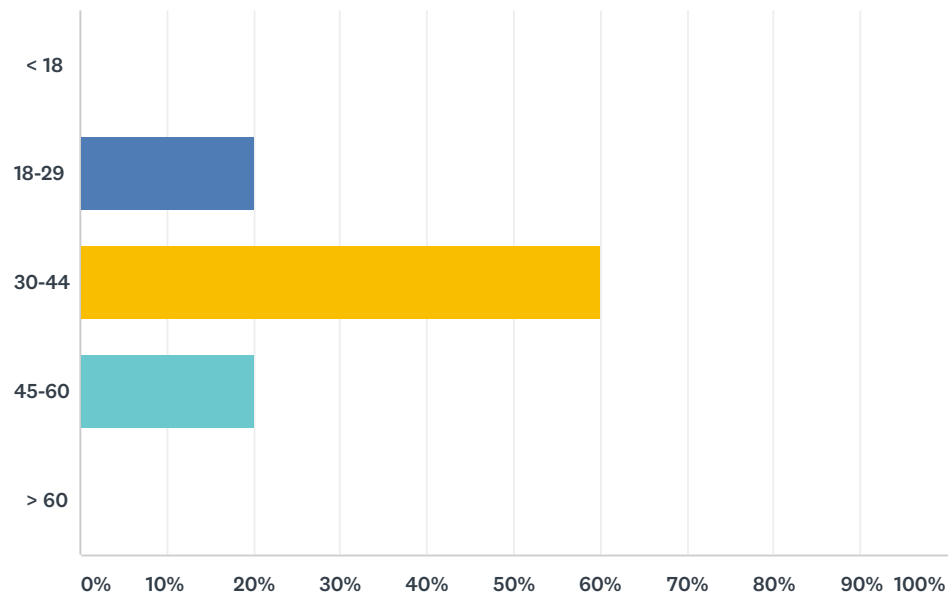
Answered: 37 Skipped: 4



ANSWER CHOICES		RESPONSES	
Yes		21.62%	8
No		78.38%	29
TOTAL			37

Q27 Age

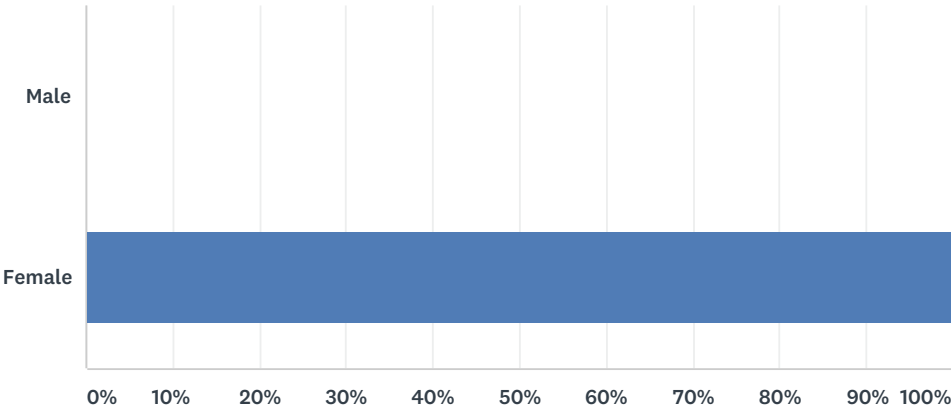
Answered: 5 Skipped: 36



ANSWER CHOICES	RESPONSES	
< 18	0.00%	0
18-29	20.00%	1
30-44	60.00%	3
45-60	20.00%	1
> 60	0.00%	0
TOTAL		5

Q28 Gender

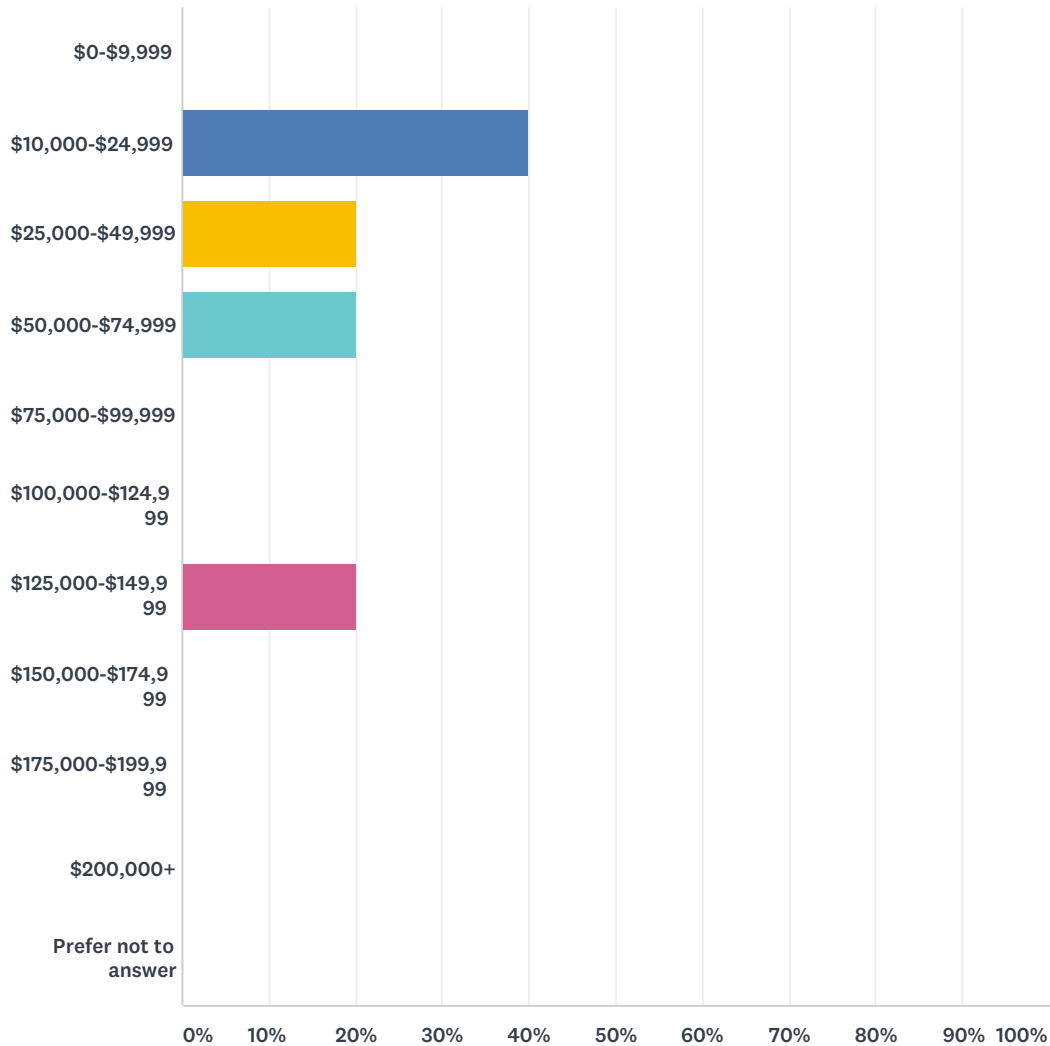
Answered: 5 Skipped: 36



ANSWER CHOICES		RESPONSES	
Male		0.00%	0
Female		100.00%	5
TOTAL			5

Q29 Household Income

Answered: 5 Skipped: 36

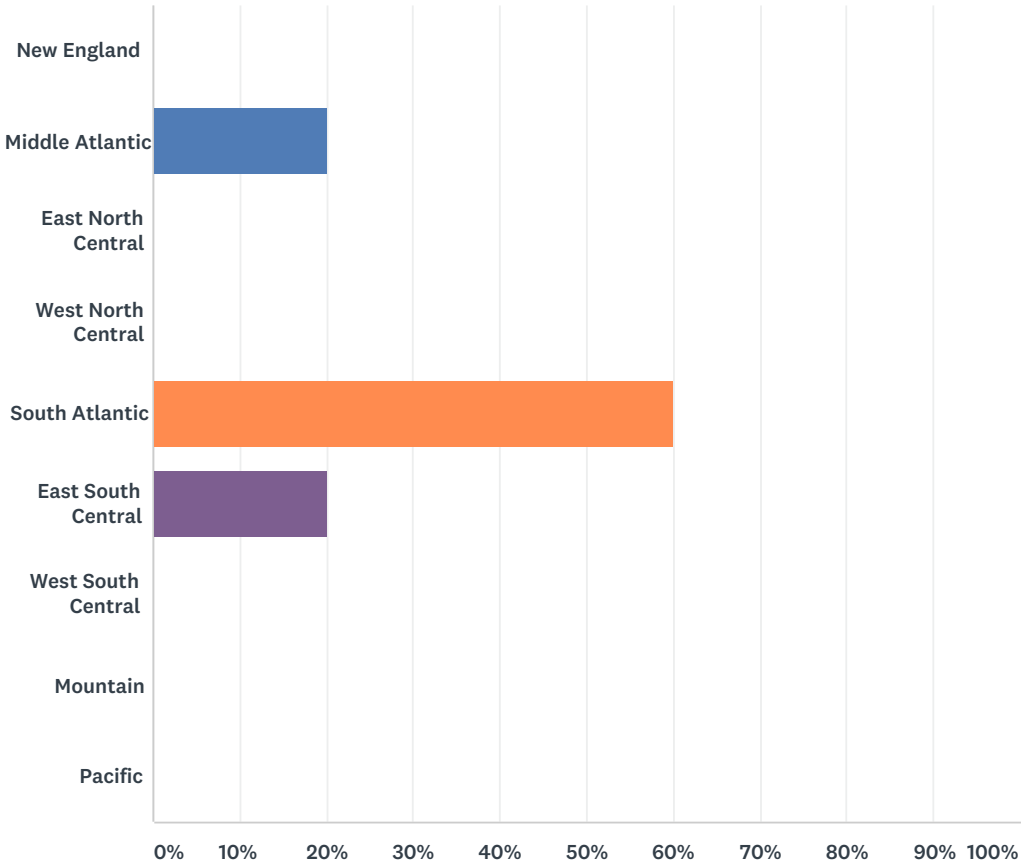


ANSWER CHOICES	RESPONSES	
\$0-\$9,999	0.00%	0
\$10,000-\$24,999	40.00%	2
\$25,000-\$49,999	20.00%	1
\$50,000-\$74,999	20.00%	1
\$75,000-\$99,999	0.00%	0
\$100,000-\$124,999	0.00%	0
\$125,000-\$149,999	20.00%	1
\$150,000-\$174,999	0.00%	0
\$175,000-\$199,999	0.00%	0
\$200,000+	0.00%	0

Prefer not to answer	0.00%	0
TOTAL		5

Q30 Region

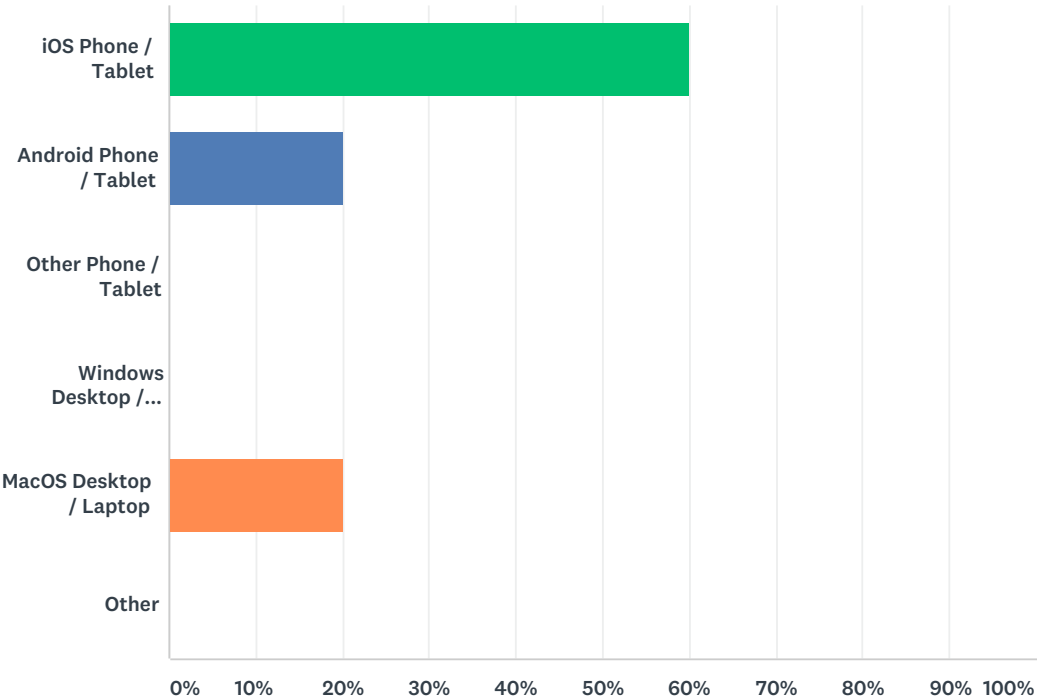
Answered: 5 Skipped: 36



ANSWER CHOICES	RESPONSES	
New England	0.00%	0
Middle Atlantic	20.00%	1
East North Central	0.00%	0
West North Central	0.00%	0
South Atlantic	60.00%	3
East South Central	20.00%	1
West South Central	0.00%	0
Mountain	0.00%	0
Pacific	0.00%	0
TOTAL		5

Q31 Device Type

Answered: 5 Skipped: 36



ANSWER CHOICES	RESPONSES	
iOS Phone / Tablet	60.00%	3
Android Phone / Tablet	20.00%	1
Other Phone / Tablet	0.00%	0
Windows Desktop / Laptop	0.00%	0
MacOS Desktop / Laptop	20.00%	1
Other	0.00%	0
TOTAL		5