

# The Usage of Best Practices and Procedures in the Database Community

This is the data relating to the above paper  
All data relating to comments has been removed for anonymization purposes

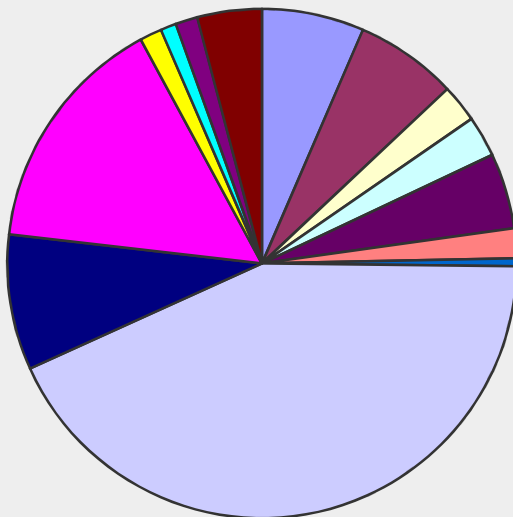
## Management of Database Systems

Which option best summarises your current job role? Please select one only.

Answer Options	Response Percent	Response Count
Business Intelligence Analyst / Data Analyst / Data Business Intelligence Architect	6.5%	27
Chief Technology Officer (CTO)/ Chief Information Director / Vice President / Owner/ President	2.4%	10
Data Architect / Data Consultant	2.6%	11
Data Manager / Data Steward	4.8%	20
Data Modeller	1.9%	8
Database Administrator (DBA) / Database Engineer	0.5%	2
Database Architect / Database Consultant	43.1%	180
Database Developer	8.6%	36
Head of Data	15.3%	64
Head of IT Operations	1.4%	6
IT Operational Analyst	1.0%	4
Service Manager / Technology Manager / Team Lead	1.4%	6
Other, please specify	4.1%	17
<b>answered question</b>		<b>418</b>
<b>skipped question</b>		<b>35</b>

Other data removed for anonymization purposes

Which option best summarises your current job role? Please



- Business Intelligence Analyst / Data Analyst / Data Scientist
- Business Intelligence Architect
- Chief Technology Officer (CTO)/ Chief Information Officer (CIO)
- Director / Vice President / Owner/ President
- Data Architect / Data Consultant
- Data Manager / Data Steward
- Data Modeller
- Database Administrator (DBA) / Database Engineer
- Database Architect / Database Consultant
- Database Developer
- Head of Data
- Head of IT Operations
- IT Operational Analyst
- Service Manager / Technology Manager / Team Lead

## Management of Database Systems

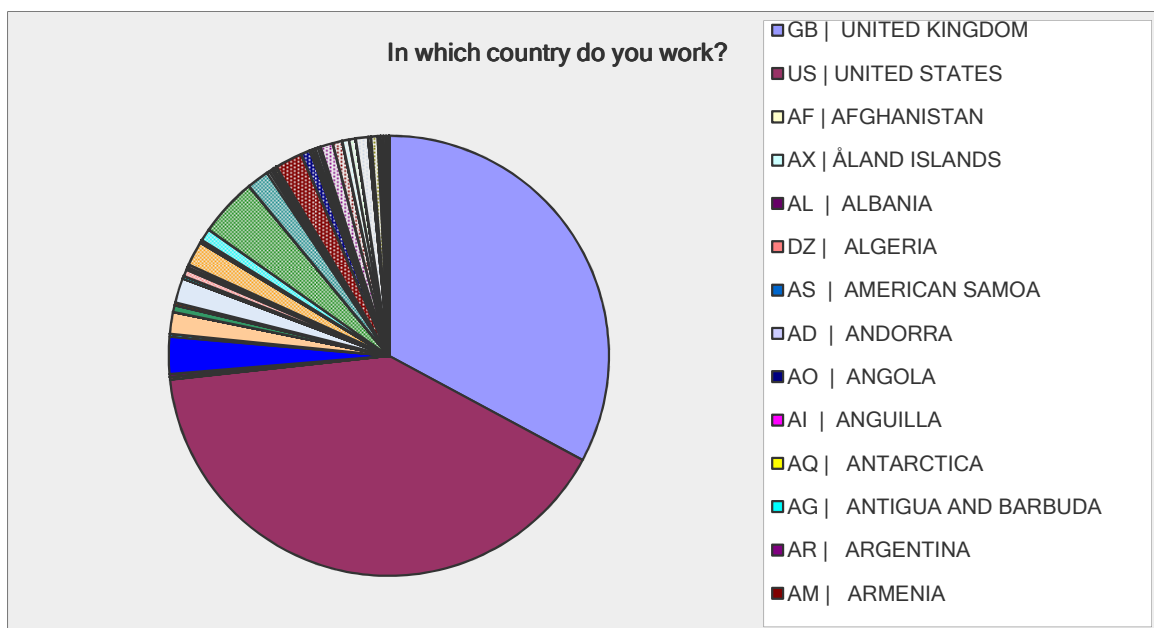
In which country do you work?		
Answer Options	Response Percent	Response Count
GB   UNITED KINGDOM	32.7%	144
US   UNITED STATES	40.2%	177
AF   AFGHANISTAN	0.0%	0
AX   ÅLAND ISLANDS	0.0%	0
AL   ALBANIA	0.0%	0
DZ   ALGERIA	0.2%	1
AS   AMERICAN SAMOA	0.0%	0
AD   ANDORRA	0.0%	0
AO   ANGOLA	0.0%	0
AI   ANGUILLA	0.0%	0
AQ   ANTARCTICA	0.0%	0
AG   ANTIGUA AND BARBUDA	0.0%	0
AR   ARGENTINA	0.2%	1
AM   ARMENIA	0.0%	0
AW   ARUBA	0.0%	0
AU   AUSTRALIA	2.7%	12
AT   AUSTRIA	0.2%	1
AZ   AZERBAIJAN	0.0%	0
BS   BAHAMAS	0.0%	0
BH   BAHRAIN	0.0%	0
BD   BANGLADESH	0.0%	0
BB   BARBADOS	0.0%	0
BY   BELARUS	0.0%	0
BE   BELGIUM	1.6%	7
BZ   BELIZE	0.0%	0
BJ   BENIN	0.0%	0
BM   BERMUDA	0.0%	0
BT   BHUTAN	0.0%	0
BO   BOLIVIA, PLURINATIONAL STATE OF	0.0%	0
BQ   BONAIRE, SINT EUSTATIUS AND SABA	0.0%	0
BA   BOSNIA AND HERZEGOVINA	0.0%	0
BW   BOTSWANA	0.0%	0
BV   BOUVET ISLAND	0.0%	0
BR   BRAZIL	0.5%	2
IO   BRITISH INDIAN OCEAN TERRITORY	0.0%	0
BN   BRUNEI DARUSSALAM	0.0%	0
BG   BULGARIA	0.2%	1
BF   BURKINA FASO	0.0%	0
BI   BURUNDI	0.0%	0
KH   CAMBODIA	0.0%	0
CM   CAMEROON	0.0%	0
CA   CANADA	1.8%	8
CV   CAPE VERDE	0.0%	0
KY   CAYMAN ISLANDS	0.0%	0
CF   CENTRAL AFRICAN REPUBLIC	0.0%	0
TD   CHAD	0.0%	0
CL   CHILE	0.0%	0
CN   CHINA	0.2%	1
CX   CHRISTMAS ISLAND	0.0%	0
CC   COCOS (KEELING) ISLANDS	0.0%	0
CO   COLOMBIA	0.0%	0
KM   COMOROS	0.0%	0

CG	CONGO	0.0%	0
CD	CONGO, THE DEMOCRATIC REPUBLIC OF THE	0.0%	0
CK	COOK ISLANDS	0.0%	0
CR	COSTA RICA	0.0%	0
CI	CÔTE D'IVOIRE	0.0%	0
HR	CROATIA	0.0%	0
CU	CUBA	0.0%	0
CW	CURAÇAO	0.0%	0
CY	CYPRUS	0.0%	0
CZ	CZECH REPUBLIC	0.5%	2
DK	DENMARK	0.2%	1
DJ	DJIBOUTI	0.0%	0
DM	DOMINICA	0.0%	0
DO	DOMINICAN REPUBLIC	0.0%	0
EC	ECUADOR	0.0%	0
EG	EGYPT	0.0%	0
SV	EL SALVADOR	0.0%	0
GQ	EQUATORIAL GUINEA	0.0%	0
ER	ERITREA	0.0%	0
EE	ESTONIA	0.0%	0
ET	ETHIOPIA	0.0%	0
FK	FALKLAND ISLANDS (MALVINAS)	0.0%	0
FO	FAROE ISLANDS	0.0%	0
FJ	FIJI	0.0%	0
FI	FINLAND	0.0%	0
FR	FRANCE	0.2%	1
GF	FRENCH GUIANA	0.0%	0
PF	FRENCH POLYNESIA	0.0%	0
TF	FRENCH SOUTHERN TERRITORIES	0.0%	0
GA	GABON	0.0%	0
GM	GAMBIA	0.0%	0
GE	GEORGIA	0.0%	0
DE	GERMANY	1.8%	8
GH	GHANA	0.0%	0
GI	GIBRALTAR	0.0%	0
GR	GREECE	0.2%	1
GL	GREENLAND	0.0%	0
GD	GRENADA	0.0%	0
GP	GUADELOUPE	0.0%	0
GU	GUAM	0.0%	0
GT	GUATEMALA	0.0%	0
GG	GUERNSEY	0.0%	0
GN	GUINEA	0.0%	0
GW	GUINEA-BISSAU	0.0%	0
GY	GUYANA	0.0%	0
HT	HAITI	0.0%	0
HM	HEARD ISLAND AND MCDONALD ISLANDS	0.0%	0
VA	HOLY SEE (VATICAN CITY STATE)	0.0%	0
HN	HONDURAS	0.0%	0
HK	HONG KONG	0.0%	0
HU	HUNGARY	0.9%	4
IS	ICELAND	0.0%	0
IN	INDIA	4.3%	19
ID	INDONESIA	0.0%	0
IR	IRAN, ISLAMIC REPUBLIC OF	0.0%	0
IQ	IRAQ	0.0%	0
IE	IRELAND	1.6%	7
IM	ISLE OF MAN	0.2%	1
IL	ISRAEL	0.2%	1

IT   ITALY	0.2%	1
JM   JAMAICA	0.0%	0
JP   JAPAN	0.0%	0
JE   JERSEY	0.0%	0
JO   JORDAN	0.0%	0
KZ   KAZAKHSTAN	0.0%	0
KE   KENYA	0.0%	0
KI   KIRIBATI	0.0%	0
KP   KOREA, DEMOCRATIC PEOPLE'S REPUBLIC	0.0%	0
KR   KOREA, REPUBLIC OF	0.0%	0
KW   KUWAIT	0.0%	0
KG   KYRGYZSTAN	0.0%	0
LA   LAO PEOPLE'S DEMOCRATIC REPUBLIC	0.0%	0
LV   LATVIA	0.0%	0
LB   LEBANON	0.0%	0
LS   LESOTHO	0.0%	0
LR   LIBERIA	0.0%	0
LY   LIBYA	0.0%	0
LI   LIECHTENSTEIN	0.0%	0
LT   LITHUANIA	0.2%	1
LU   LUXEMBOURG	0.0%	0
MO   MACAO	0.0%	0
MK   MACEDONIA, THE FORMER YUGOSLAV	0.0%	0
MG   MADAGASCAR	0.0%	0
MW   MALAWI	0.0%	0
MY   MALAYSIA	0.0%	0
MV   MALDIVES	0.0%	0
ML   MALI	0.0%	0
MT   MALTA	0.0%	0
MH   MARSHALL ISLANDS	0.0%	0
MQ   MARTINIQUE	0.0%	0
MR   MAURITANIA	0.0%	0
MU   MAURITIUS	0.0%	0
YT   MAYOTTE	0.0%	0
MX   MEXICO	0.0%	0
FM   MICRONESIA, FEDERATED STATES OF	0.0%	0
MD   MOLDOVA, REPUBLIC OF	0.0%	0
MC   MONACO	0.0%	0
MN   MONGOLIA	0.0%	0
ME   MONTENEGRO	0.0%	0
MS   MONTSERRAT	0.0%	0
MA   MOROCCO	0.0%	0
MZ   MOZAMBIQUE	0.0%	0
MM   MYANMAR	0.0%	0
NA   NAMIBIA	0.0%	0
NR   NAURU	0.0%	0
NP   NEPAL	0.0%	0
NL   NETHERLANDS	2.0%	9
NC   NEW CALEDONIA	0.0%	0
NZ   NEW ZEALAND	0.7%	3
NI   NICARAGUA	0.0%	0
NE   NIGER	0.0%	0
NG   NIGERIA	0.0%	0
NU   NIUE	0.0%	0
NF   NORFOLK ISLAND	0.0%	0
MP   NORTHERN MARIANA ISLANDS	0.0%	0
NO   NORWAY	0.2%	1
OM   OMAN	0.0%	0
PK   PAKISTAN	0.2%	1

PW	PALAU	0.0%	0
PS	PALESTINIAN TERRITORY, OCCUPIED	0.0%	0
PA	PANAMA	0.2%	1
PG	PAPUA NEW GUINEA	0.0%	0
PY	PARAGUAY	0.2%	1
PE	PERU	0.0%	0
PH	PHILIPPINES	0.0%	0
PN	PITCAIRN	0.0%	0
PL	POLAND	0.9%	4
PT	PORTUGAL	0.7%	3
PR	PUERTO RICO	0.0%	0
QA	QATAR	0.0%	0
RE	RÉUNION	0.0%	0
RO	ROMANIA	0.5%	2
RU	RUSSIAN FEDERATION	0.5%	2
RW	RWANDA	0.0%	0
BL	SAINT BARTHÉLEMY	0.0%	0
SH	SAINT HELENA, ASCENSION AND TRISTAN DA	0.0%	0
KN	SAINT KITTS AND NEVIS	0.0%	0
LC	SAINT LUCIA	0.0%	0
MF	SAINT MARTIN (FRENCH PART)	0.0%	0
PM	SAINT PIERRE AND MIQUELON	0.0%	0
VC	SAINT VINCENT AND THE GRENADINES	0.0%	0
WS	SAMOA	0.0%	0
SM	SAN MARINO	0.0%	0
ST	SAO TOME AND PRINCIPE	0.0%	0
SA	SAUDI ARABIA	0.0%	0
SN	SENEGAL	0.0%	0
RS	SERBIA	0.0%	0
SC	SEYCHELLES	0.0%	0
SL	SIERRA LEONE	0.0%	0
SG	SINGAPORE	0.0%	0
SX	SINT MAARTEN (DUTCH PART)	0.0%	0
SK	SLOVAKIA	0.0%	0
SI	SLOVENIA	0.0%	0
SB	SOLOMON ISLANDS	0.0%	0
SO	SOMALIA	0.0%	0
ZA	SOUTH AFRICA	0.9%	4
GS	SOUTH GEORGIA AND THE SOUTH SANDWICH	0.0%	0
SS	SOUTH SUDAN	0.0%	0
ES	SPAIN	0.2%	1
LK	SRI LANKA	0.0%	0
SD	SUDAN	0.0%	0
SR	SURINAME	0.0%	0
SJ	SVALBARD AND JAN MAYEN	0.0%	0
SZ	SWAZILAND	0.0%	0
SE	SWEDEN	0.5%	2
CH	SWITZERLAND	0.2%	1
SY	SYRIAN ARAB REPUBLIC	0.0%	0
TW	TAIWAN, PROVINCE OF CHINA	0.0%	0
TJ	TAJIKISTAN	0.0%	0
TZ	TANZANIA, UNITED REPUBLIC OF	0.0%	0
TH	THAILAND	0.0%	0
TL	TIMOR-LESTE	0.0%	0
TG	TOGO	0.0%	0
TK	TOKELAU	0.0%	0
TO	TONGA	0.0%	0
TT	TRINIDAD AND TOBAGO	0.0%	0
TN	TUNISIA	0.0%	0

TR   TURKEY	0.2%	1
TM   TURKMENISTAN	0.0%	0
TC   TURKS AND CAICOS ISLANDS	0.0%	0
TV   TUVALU	0.0%	0
UG   UGANDA	0.0%	0
UA   UKRAINE	0.0%	0
AE   UNITED ARAB EMIRATES	0.2%	1
UM   UNITED STATES MINOR OUTLYING ISLANDS	0.0%	0
UY   URUGUAY	0.0%	0
UZ   UZBEKISTAN	0.0%	0
VU   VANUATU	0.0%	0
VE   VENEZUELA, BOLIVARIAN REPUBLIC OF	0.2%	1
VN   VIET NAM	0.0%	0
VG   VIRGIN ISLANDS, BRITISH	0.0%	0
VI   VIRGIN ISLANDS, U.S.	0.0%	0
WF   WALLIS AND FUTUNA	0.0%	0
EH   WESTERN SAHARA	0.0%	0
YE   YEMEN	0.0%	0
ZM   ZAMBIA	0.0%	0
ZW   ZIMBABWE	0.0%	0
<b>answered question</b>		<b>440</b>
<b>skipped question</b>		<b>13</b>

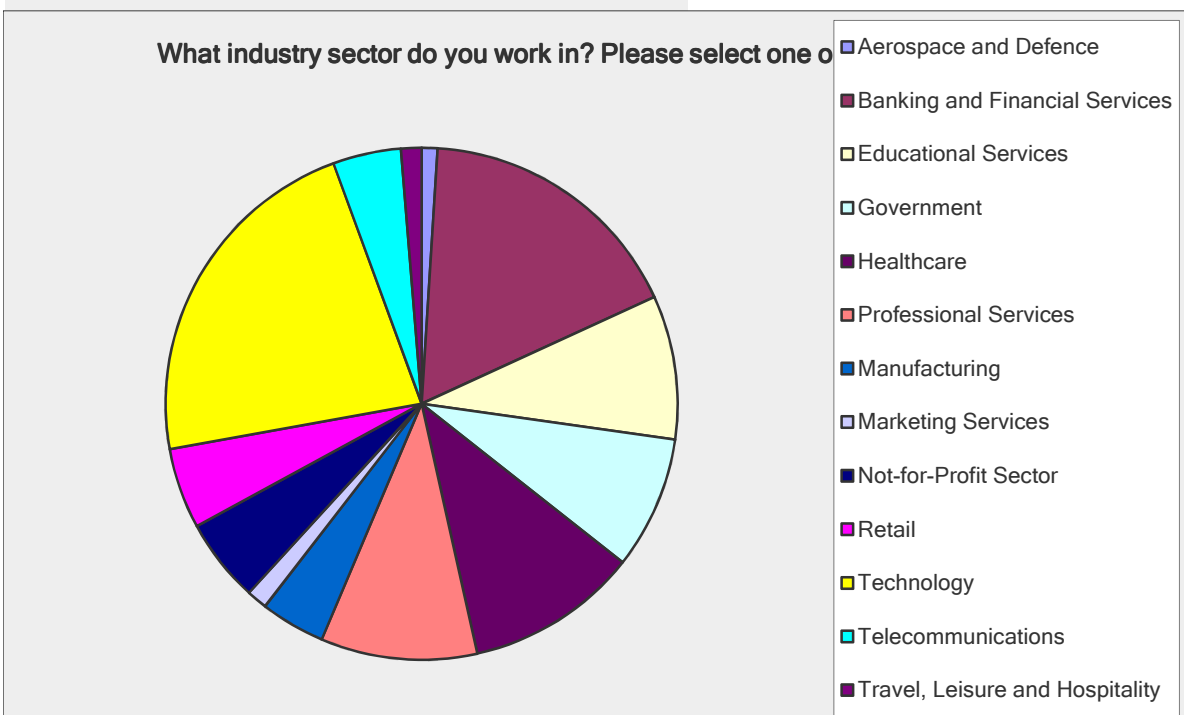


## Management of Database Systems

What industry sector do you work in? Please select one option.

Answer Options	Response Percent	Response Count
Aerospace and Defence	1.0%	4
Banking and Financial Services	17.2%	68
Educational Services	9.1%	36
Government	8.4%	33
Healthcare	10.9%	43
Professional Services	9.9%	39
Manufacturing	4.1%	16
Marketing Services	1.3%	5
Not-for-Profit Sector	5.3%	21
Retail	5.1%	20
Technology	22.3%	88
Telecommunications	4.3%	17
Travel, Leisure and Hospitality	1.3%	5
Other, please specify		59
<i>answered question</i>		<b>395</b>
<i>skipped question</i>		<b>58</b>

Other data removed for anonymization purposes



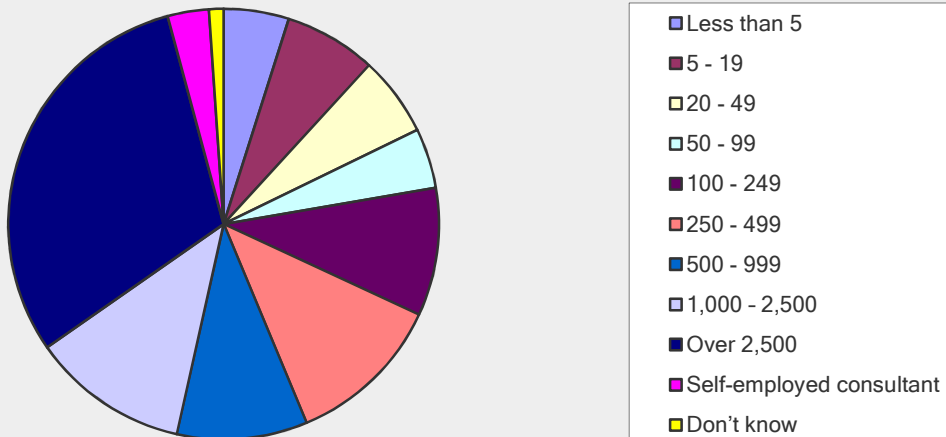


## Management of Database Systems

What is the approximate size of your organization's total workforce? Please select one.

Answer Options	Response Percent	Response Count
Less than 5	4.9%	22
5 - 19	6.9%	31
20 - 49	6.0%	27
50 - 99	4.5%	20
100 - 249	9.6%	43
250 - 499	11.8%	53
500 - 999	9.8%	44
1,000 - 2,500	11.8%	53
Over 2,500	30.5%	137
Self-employed consultant	3.1%	14
Don't know	1.1%	5
<i>answered question</i>		<b>449</b>
<i>skipped question</i>		<b>4</b>

What is the approximate size of your organization's total workforce? Please select one.

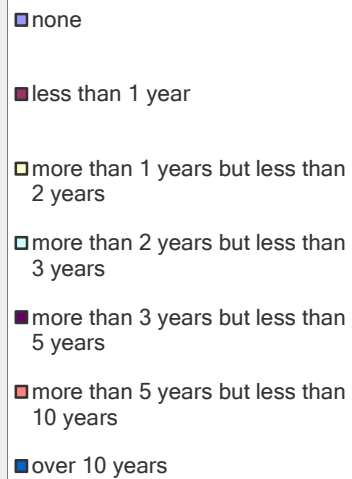
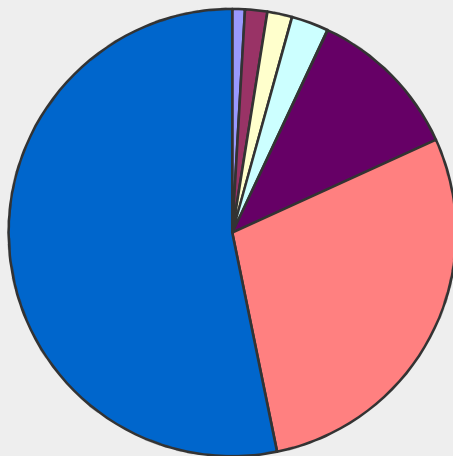


## Management of Database Systems

How long have you worked in the database field? Please select one.

Answer Options	Response Percent	Response Count
none	0.9%	4
less than 1 year	1.6%	7
more than 1 years but less than 2 years	1.8%	8
more than 2 years but less than 3 years	2.7%	12
more than 3 years but less than 5 years	11.2%	50
more than 5 years but less than 10 years	28.6%	128
over 10 years	53.2%	238
<i>answered question</i>		<b>447</b>
<i>skipped question</i>		<b>6</b>

How long have you worked in the database field? Please select one.

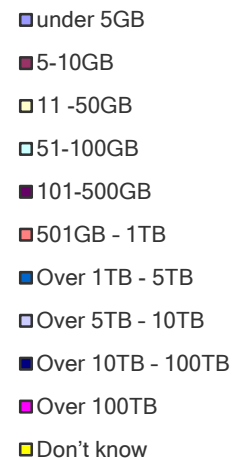
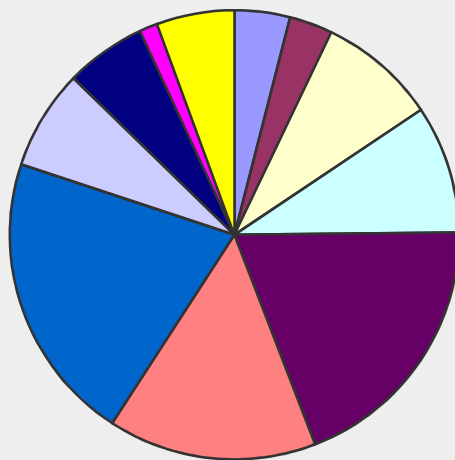


## Management of Database Systems

What is the approximate size of your largest database (overall size e.g. including data & logs)? Please select one.

Answer Options	Response Percent	Response Count
under 5GB	4.0%	18
5-10GB	3.1%	14
11 -50GB	8.5%	38
51-100GB	9.2%	41
101-500GB	19.3%	86
501GB - 1TB	15.0%	67
Over 1TB - 5TB	20.9%	93
Over 5TB - 10TB	7.2%	32
Over 10TB - 100TB	5.8%	26
Over 100TB	1.3%	6
Don't know	5.6%	25
<i>answered question</i>		<b>446</b>
<i>skipped question</i>		<b>7</b>

What is the approximate size of your largest database (overall size e.g. including data & logs)? Please select one.

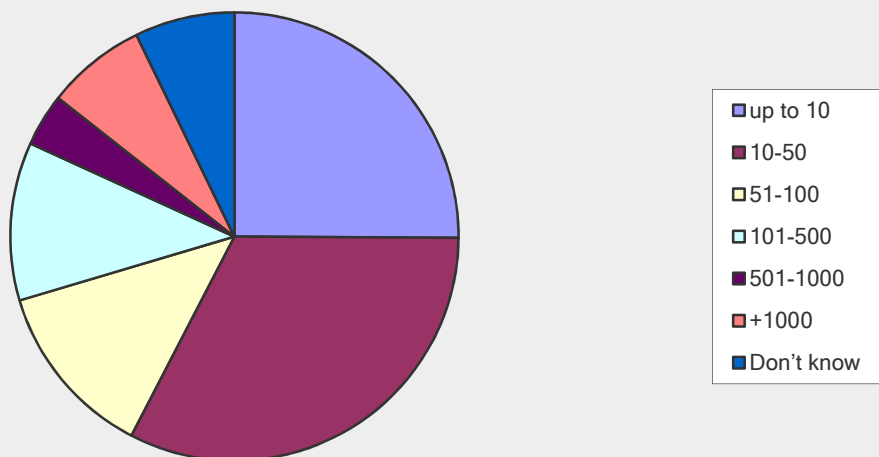


## Management of Database Systems

What is the approximate number of database servers in your organization? Please select one.

Answer Options	Response Percent	Response Count
up to 10	25.1%	112
10-50	32.5%	145
51-100	12.8%	57
101-500	11.4%	51
501-1000	3.8%	17
+1000	7.2%	32
Don't know	7.2%	32
<i>answered question</i>		<b>446</b>
<i>skipped question</i>		<b>7</b>

What is the approximate number of database servers in your organization?  
Please select one.

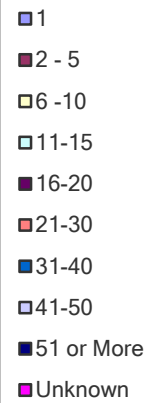
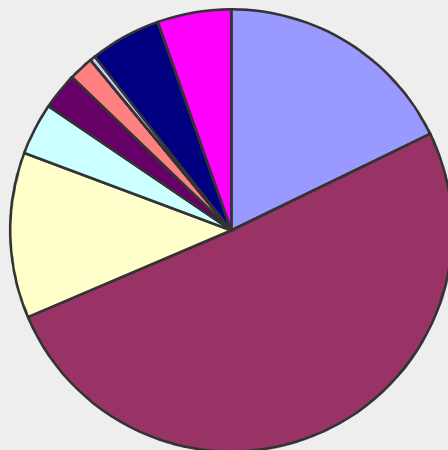


## Management of Database Systems

How many people administer the databases in your organization? Please select one.

Answer Options	Response Percent	Response Count
1	17.8%	79
2 - 5	50.8%	226
6 -10	12.1%	54
11-15	3.8%	17
16-20	2.7%	12
21-30	1.8%	8
31-40	0.0%	0
41-50	0.4%	2
51 or More	5.2%	23
Unknown	5.4%	24
<i>answered question</i>		<b>445</b>
<i>skipped question</i>		<b>8</b>

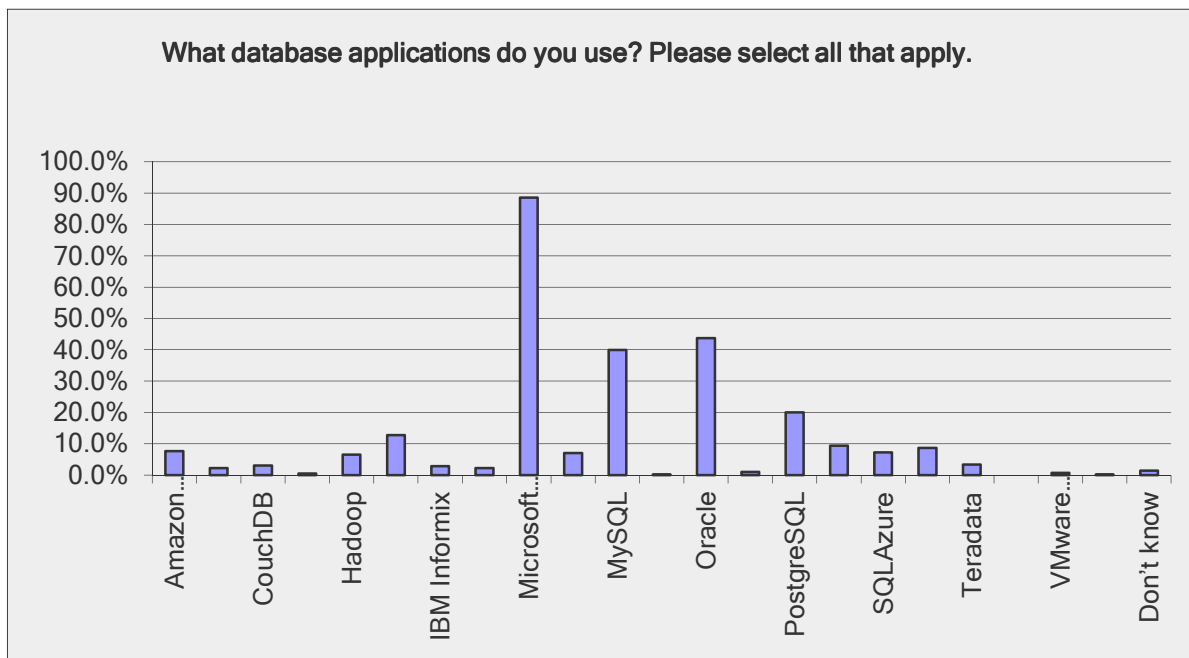
How many people administer the databases in your organization? Please select one.



## Management of Database Systems

What database applications do you use? Please select all that apply.

Answer Options	Response Percent	Response Count
Amazon Web Services (AWS): SimpleDB,	7.7%	32
Cassandra	2.2%	9
CouchDB	3.1%	13
Google App Engine Data Store	0.5%	2
Hadoop	6.5%	27
IBM DB2	12.8%	53
IBM Informix	2.9%	12
Ingres	2.2%	9
Microsoft SQL Server	88.6%	367
MongoDB	7.0%	29
MySQL	39.9%	165
Nuodb	0.2%	1
Oracle	43.7%	181
Oracle Berkeley DB	1.0%	4
PostgreSQL	20.0%	83
SAP	9.4%	39
SQLAzure	7.2%	30
Sybase	8.7%	36
Teradata	3.4%	14
Xeround	0.0%	0
VMware GemFire	0.7%	3
VoltDB	0.2%	1
Don't know	1.4%	6
Other, please specify		53
<i>answered question</i>		<b>414</b>
<i>skipped question</i>		<b>39</b>

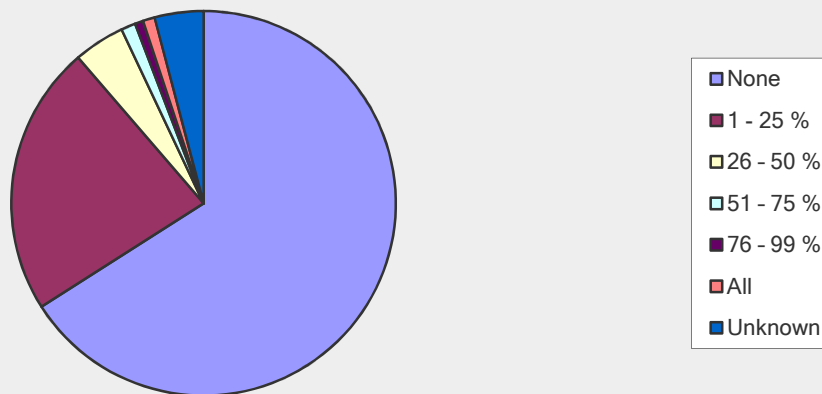


## Management of Database Systems

What percentage of your databases use cloud database services (databases which are accessible via public, private or hybrid cloud instantly, on-demand, e.g. SQL Azure)?

Answer Options	Response Percent	Response Count
None	65.9%	273
1 - 25 %	22.7%	94
26 - 50 %	4.3%	18
51 - 75 %	1.2%	5
76 - 99 %	0.7%	3
All	1.0%	4
Unknown	4.1%	17
Other, please specify		0
<i>answered question</i>		<b>414</b>
<i>skipped question</i>		<b>39</b>

What percentage of your databases use cloud database services (databases which are accessible via public, private or hybrid cloud instantly, on-demand, e.g. SQL Azure)? Please select one.

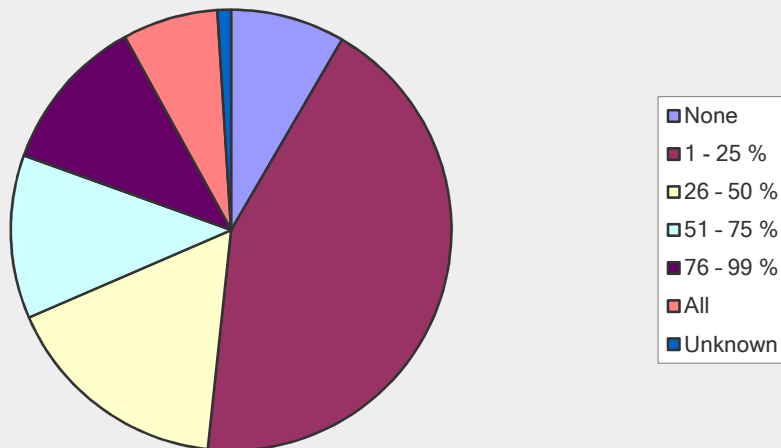


## Management of Database Systems

What percentage of your time is spent managing database servers? Please select one.

Answer Options	Response Percent	Response Count
None	8.4%	35
1 - 25 %	43.3%	180
26 - 50 %	16.8%	70
51 - 75 %	12.0%	50
76 - 99 %	11.5%	48
All	7.0%	29
Unknown	1.0%	4
Other, please specify		2
<i>answered question</i>		<b>416</b>
<i>skipped question</i>		<b>37</b>

What percentage of your time is spent managing database servers? Please select one.

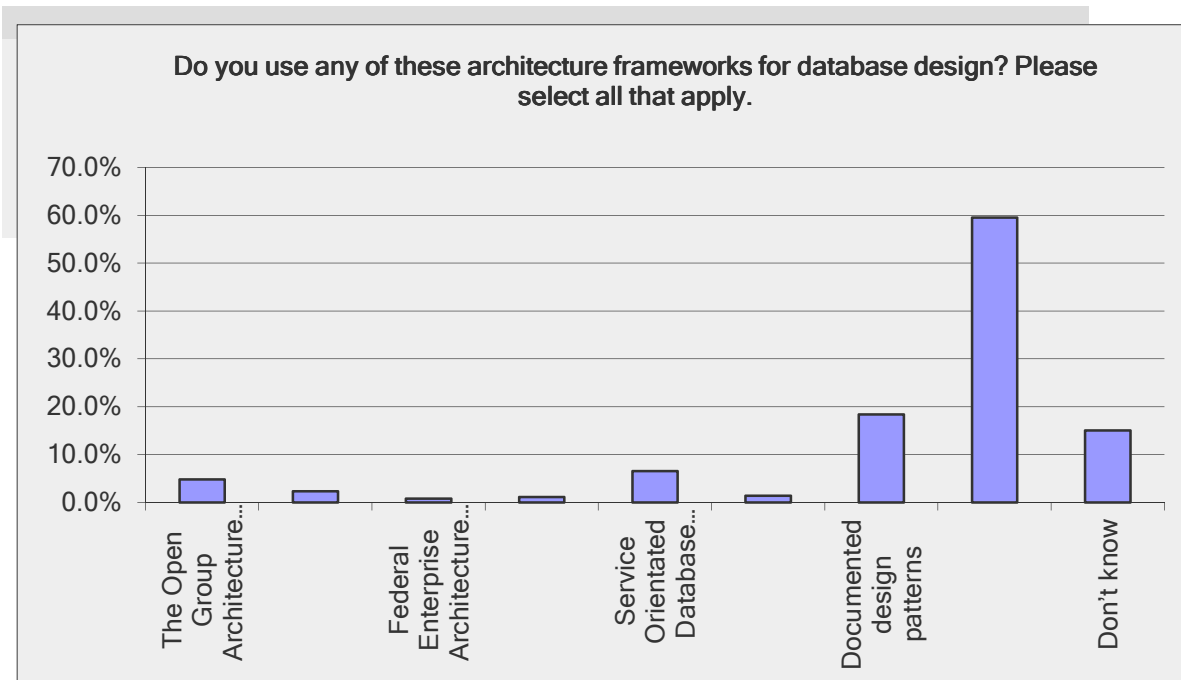




## Management of Database Systems

Do you use any of these architecture frameworks for database design? Please select all that apply.

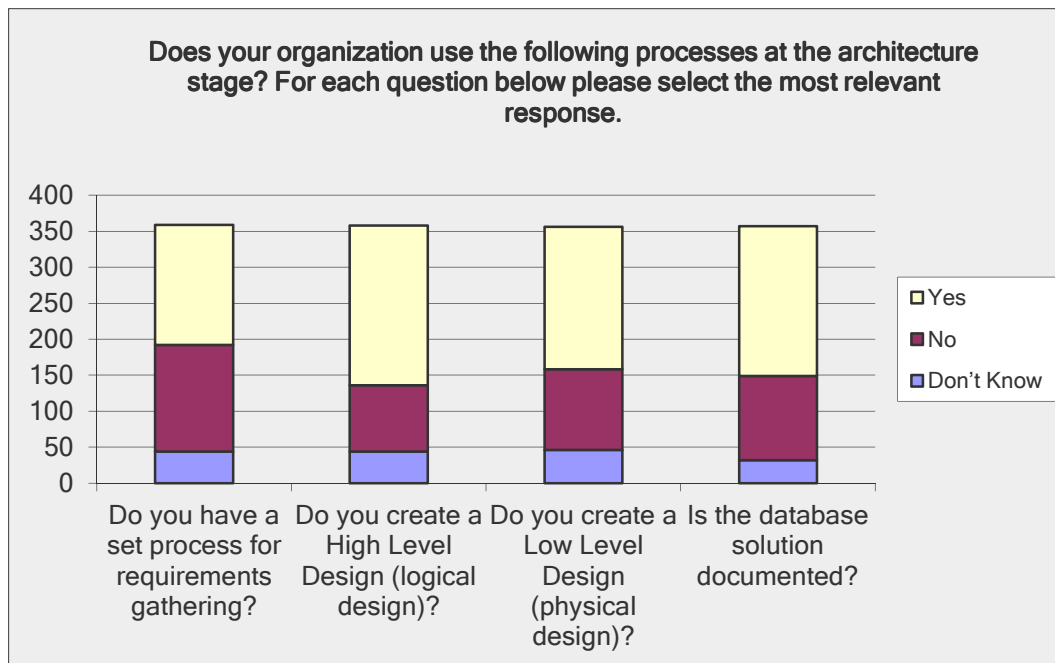
Answer Options	Response Percent	Response Count
The Open Group Architecture Framework (TOGAF)	4.8%	17
The Zachman Framework for Enterprise Architectures	2.3%	8
Federal Enterprise Architectures (FEA)	0.8%	3
Gartner	1.1%	4
Service Orientated Database Architecture (SODA)	6.5%	23
Server Reference Architecture	1.4%	5
Documented design patterns	18.4%	65
None of these	59.5%	210
Don't know	15.0%	53
Other, please specify		6
<i>answered question</i>		<b>353</b>
<i>skipped question</i>		<b>100</b>



## Management of Database Systems

Does your organization use the following processes at the architecture stage? For each question below please select the most relevant response.

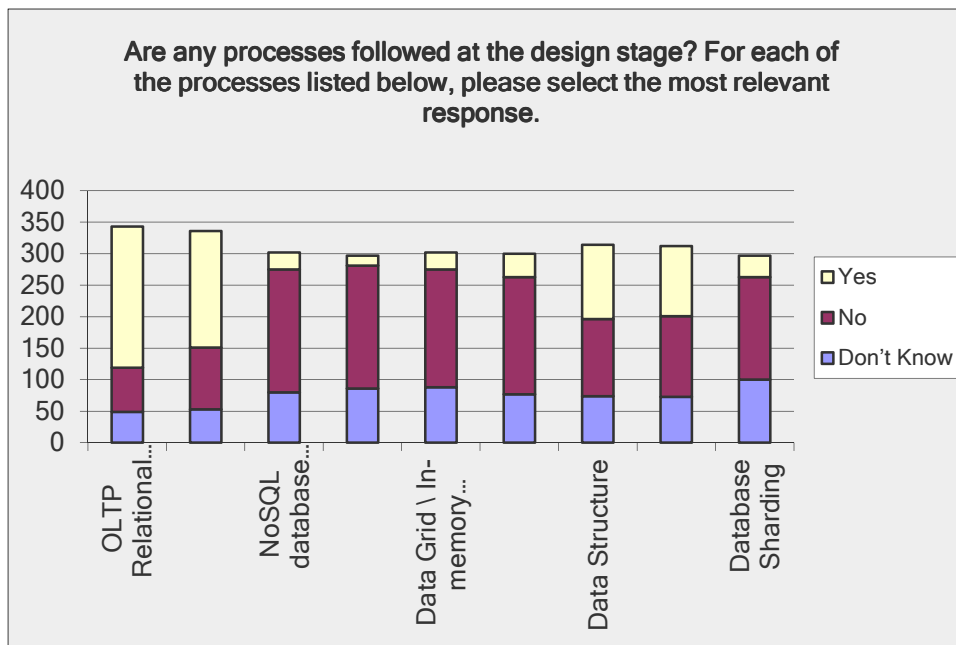
Answer Options	Yes	No	Don't Know	Response Count
Do you have a set process for requirements gathering?	167	148	44	359
Do you create a High Level Design (logical design)?	222	92	44	358
Do you create a Low Level Design (physical design)?	198	112	46	356
Is the database solution documented?	208	117	32	357
	<i>answered question</i>			<b>360</b>
	<i>skipped question</i>			<b>93</b>



## Management of Database Systems

Are any processes followed at the design stage? For each of the processes listed below, please select the most relevant response.

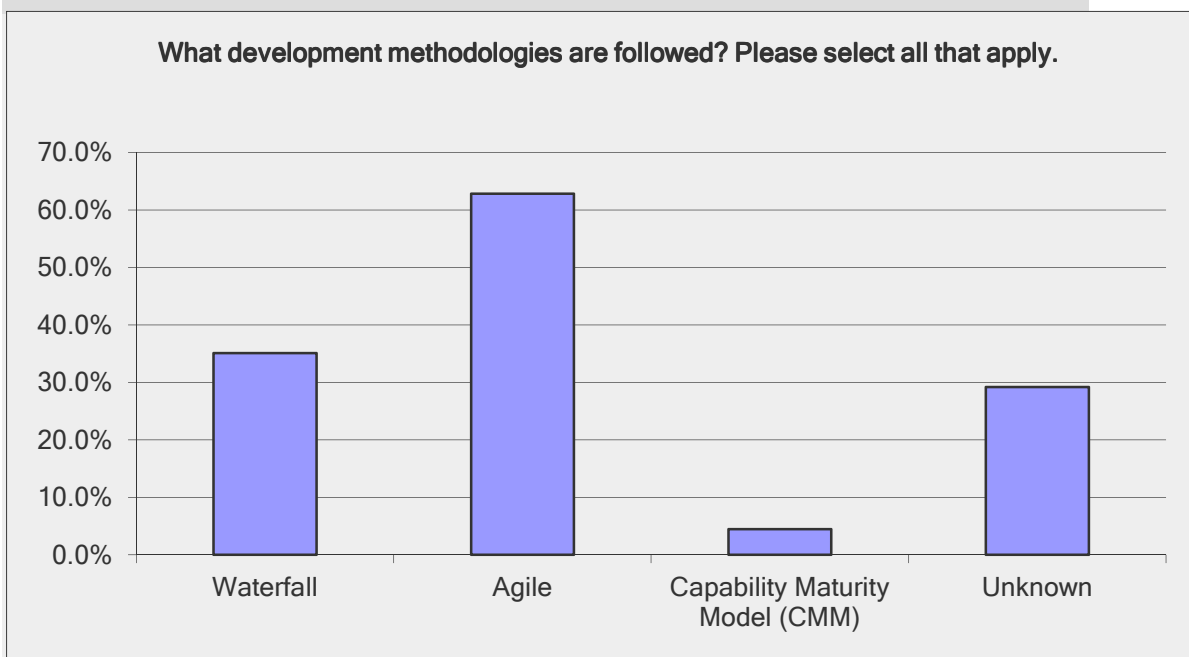
Answer Options	Yes	No	Don't Know	Response Count
OLTP Relational Database design	224	70	49	343
Data Warehouse \ OLAP cube design	185	98	53	336
NoSQL database design	27	195	80	302
NewSQL database design	16	195	86	297
Data Grid \ In-memory database design	27	187	88	302
Cloud database design	37	186	77	300
Data Structure	118	122	74	314
Hardware Manageability	111	128	73	312
Database Sharding	34	163	100	297
	<i>answered question</i>			<b>355</b>
	<i>skipped question</i>			<b>98</b>



## Management of Database Systems

What development methodologies are followed? Please select all that apply.

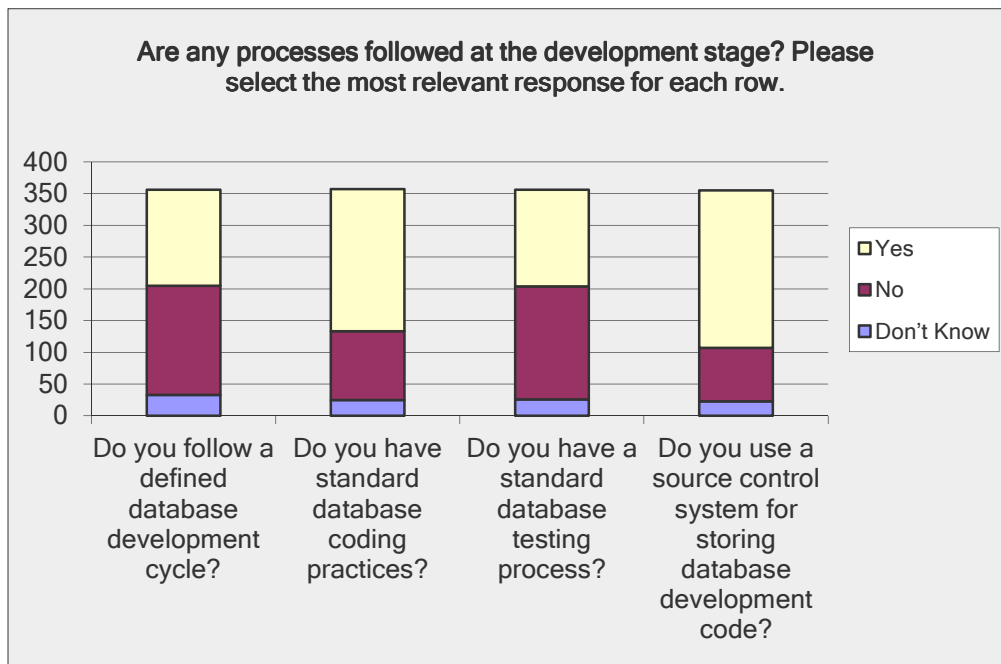
Answer Options	Response Percent	Response Count
Waterfall	35.1%	118
Agile	62.8%	211
Capability Maturity Model (CMM)	4.5%	15
Unknown	29.2%	98
Other, please specify		21
<i>answered question</i>		<b>336</b>
<i>skipped question</i>		<b>117</b>



## Management of Database Systems

Are any processes followed at the development stage? Please select the most relevant response for each row.

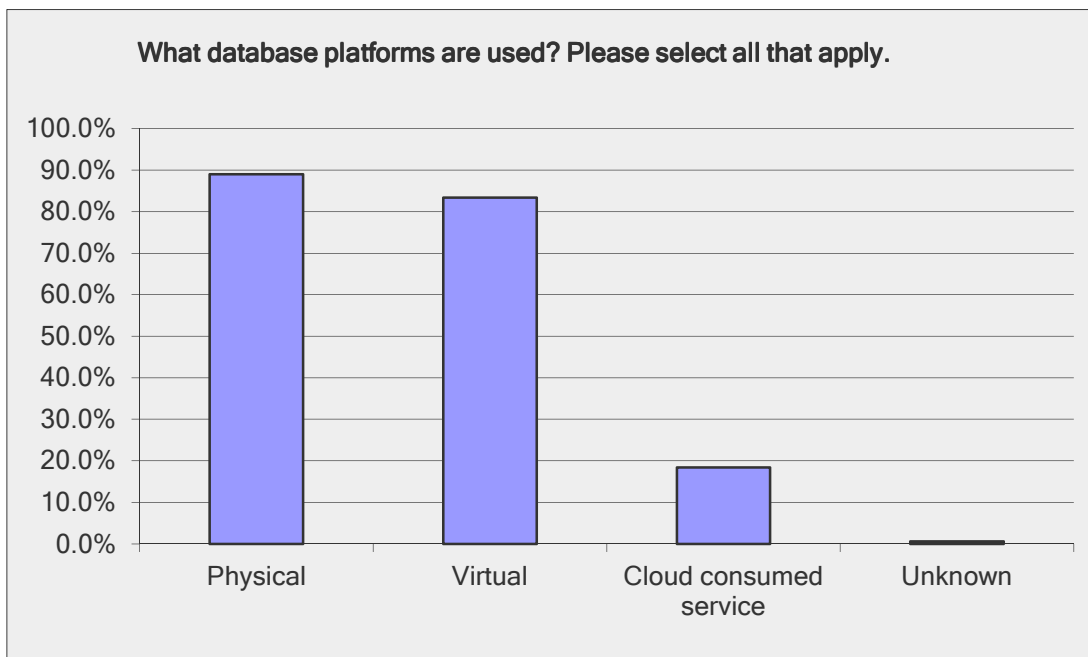
Answer Options	Yes	No	Don't Know	Response Count
Do you follow a defined database development cycle?	151	172	33	356
Do you have standard database coding practices?	224	108	25	357
Do you have a standard database testing process?	152	178	26	356
Do you use a source control system for storing database development code?	248	84	23	355
<i>answered question</i>				<b>358</b>
<i>skipped question</i>				<b>95</b>



## Management of Database Systems

What database platforms are used? Please select all that apply.

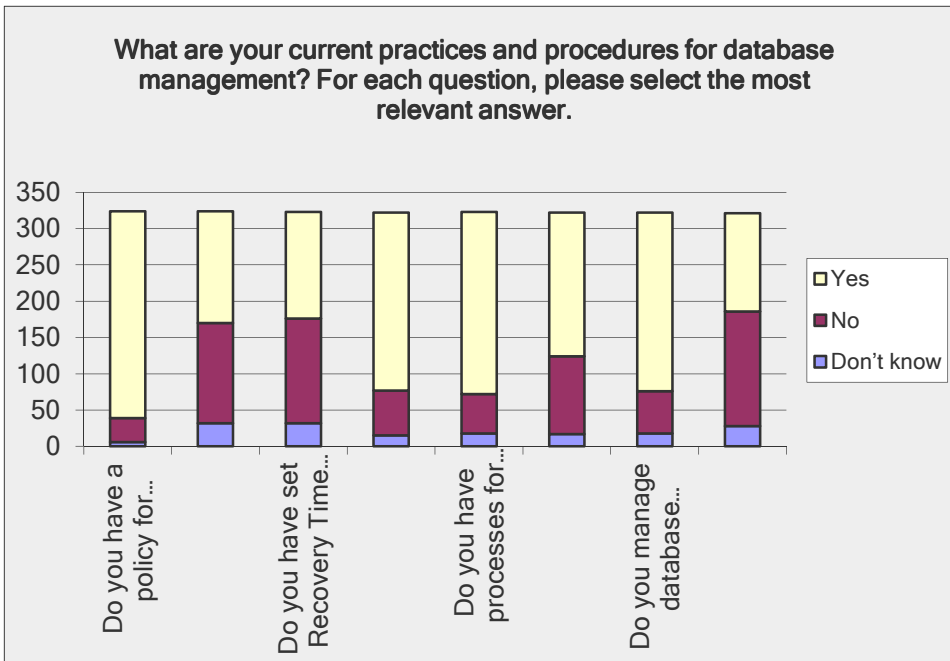
Answer Options	Response Percent	Response Count
Physical	89.0%	290
Virtual	83.4%	272
Cloud consumed service	18.4%	60
Unknown	0.6%	2
Other, please specify		0
<i>answered question</i>		<b>326</b>
<i>skipped question</i>		<b>127</b>



## Management of Database Systems

What are your current practices and procedures for database management? For each question, please select the most relevant answer.

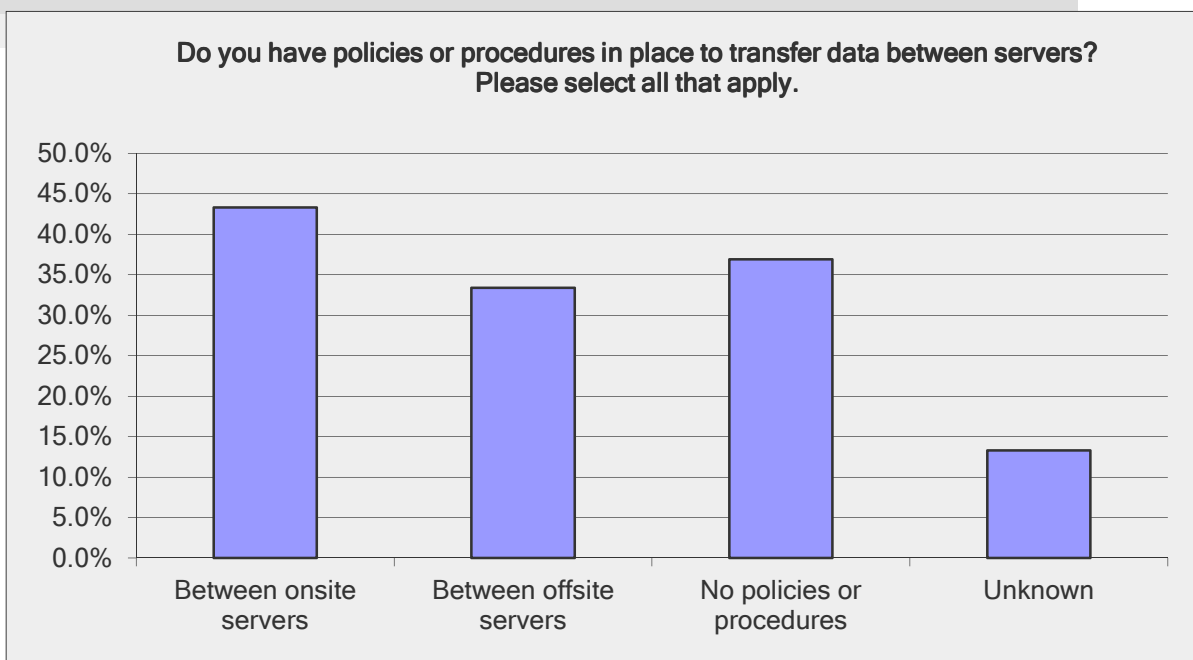
Answer Options	Yes	No	Don't know	Response Count
Do you have a policy for backup and recovery?	285	33	6	324
Do you have set Recovery Point Objectives (RPO) for your databases? (The amount of	154	138	32	324
Do you have set Recovery Time Objectives (RTO) for your databases? (The time it	147	144	32	323
Do you carry out day-to-day database maintenance?	245	62	15	322
Do you have processes for monitoring regular maintenance?	251	54	18	323
Do you have a process for managing database server performance?	198	107	17	322
Do you manage database servers using automated procedures to issue alerts?	246	58	18	322
Do you record a performance baseline?	135	158	28	321
<b>answered question</b>				<b>324</b>
<b>skipped question</b>				<b>129</b>



## Management of Database Systems

Do you have policies or procedures in place to transfer data between servers? Please select all that apply.

Answer Options	Response Percent	Response Count
Between onsite servers	43.3%	127
Between offsite servers	33.4%	98
No policies or procedures	36.9%	108
Unknown	13.3%	39
Other, please specify		1
<i>answered question</i>		<b>293</b>
<i>skipped question</i>		<b>160</b>

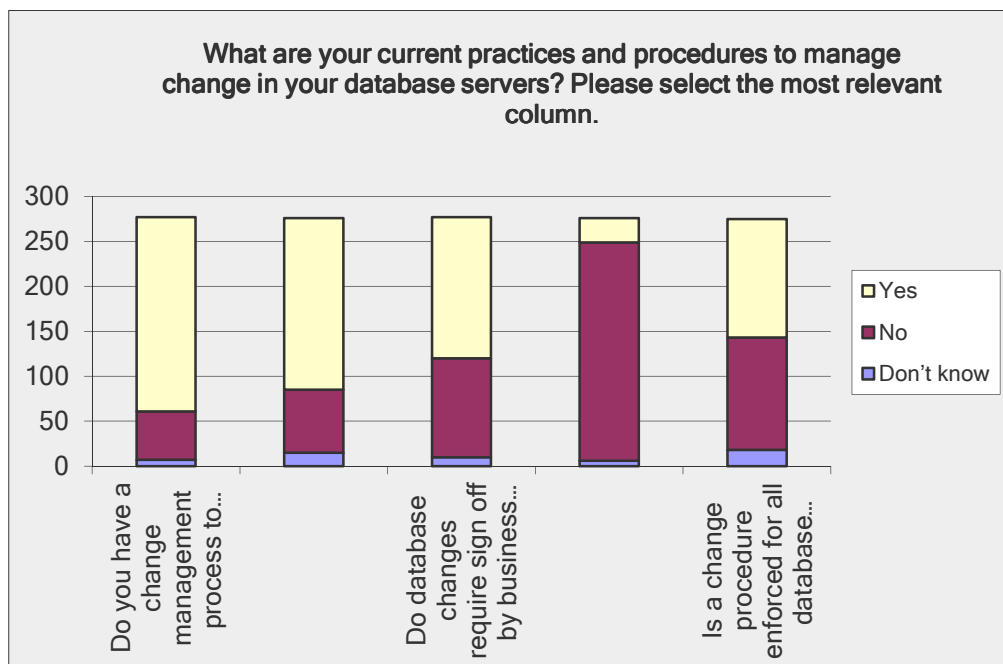




## Management of Database Systems

What are your current practices and procedures to manage change in your database servers? Please select the most relevant column.

Answer Options	Yes	No	Don't know	Response Count
Do you have a change management process to control, manage and implement changes to the live IT infrastructure or IT service?	216	54	7	277
Is there a procedure to mitigate the risk of loss of a database during a change?	191	70	15	276
Do database changes require sign off by business users?	157	110	10	277
Can anyone carry out changes to the database server?	27	243	6	276
Is a change procedure enforced for all database engines?	132	125	18	275
<i>answered question</i>				<b>277</b>
<i>skipped question</i>				<b>176</b>

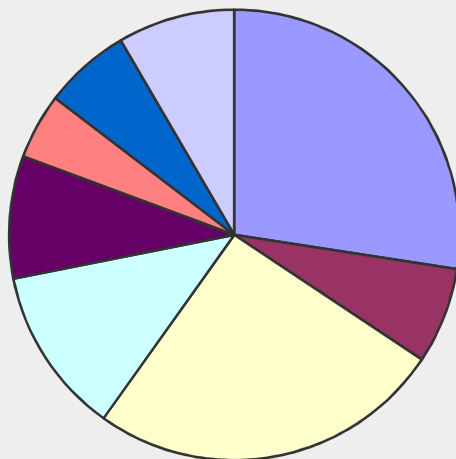


## Management of Database Systems

What is the approximate number of database changes that you carry out in a week?  
Please select one.

Answer Options	Response Percent	Response Count
Less frequently than 1 every week	27.4%	75
1 change a week	6.9%	19
Between 1 and 5 changes a week	25.5%	70
Between 6 and 10 changes a week	12.0%	33
Between 11 and 20 changes a week	8.8%	24
Between 21 and 50 changes a week	4.7%	13
More than 50 changes a week	6.2%	17
Unknown	8.4%	23
Other, please specify		8
<i>answered question</i>		<b>274</b>
<i>skipped question</i>		<b>179</b>

What is the approximate number of database changes that you carry out in a week? Please select one.



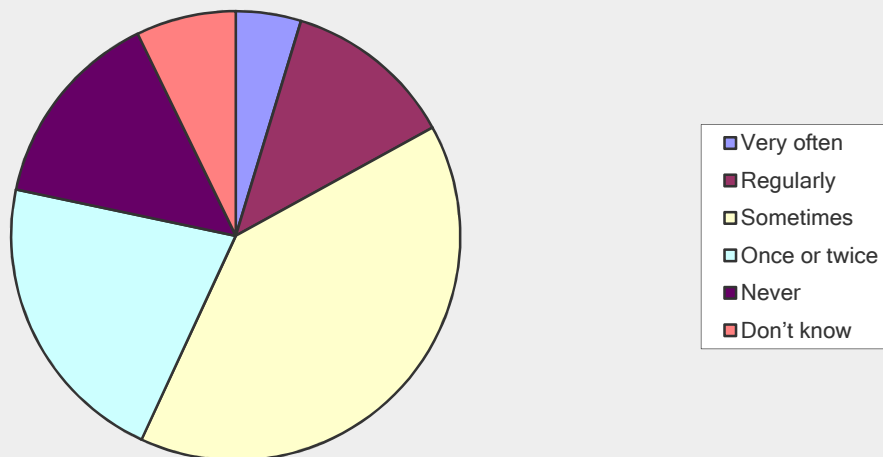
- Less frequently than 1 every week
- 1 change a week
- Between 1 and 5 changes a week
- Between 6 and 10 changes a week
- Between 11 and 20 changes a week
- Between 21 and 50 changes a week
- More than 50 changes a week
- Unknown

## Management of Database Systems

Do you think some changes are carried out 'under the radar' i.e. by not following policies and procedures? Please select one.

Answer Options	Response Percent	Response Count
Very often	4.7%	13
Regularly	12.3%	34
Sometimes	39.9%	110
Once or twice	21.4%	59
Never	14.5%	40
Don't know	7.2%	20
Other, please specify		7
<i>answered question</i>		<b>276</b>
<i>skipped question</i>		<b>177</b>

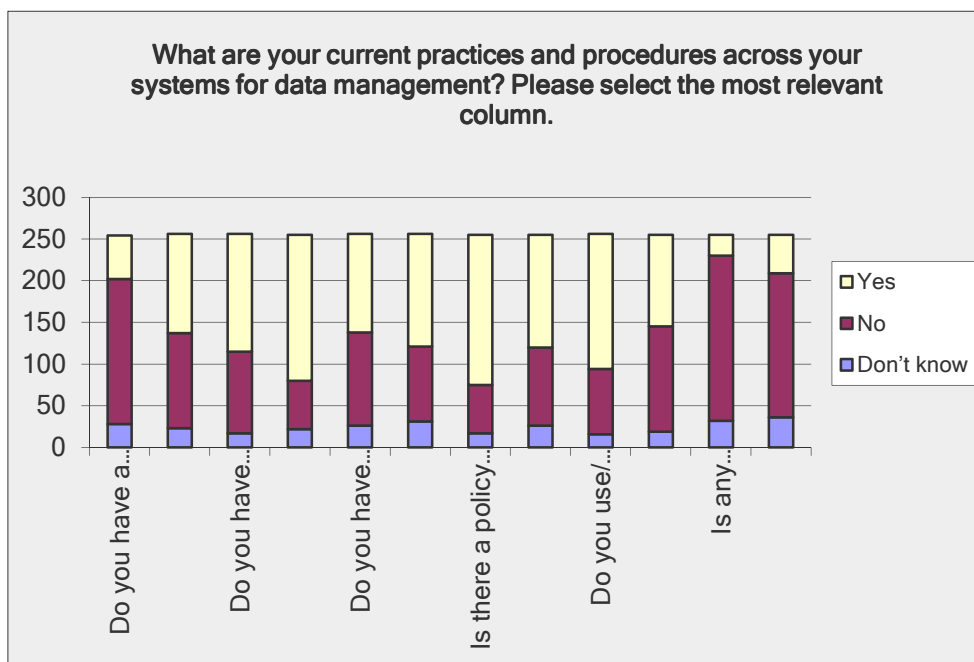
Do you think some changes are carried out 'under the radar' i.e. by not following policies and procedures? Please select one.



## Management of Database Systems

What are your current practices and procedures across your systems for data management? Please select the most relevant column.

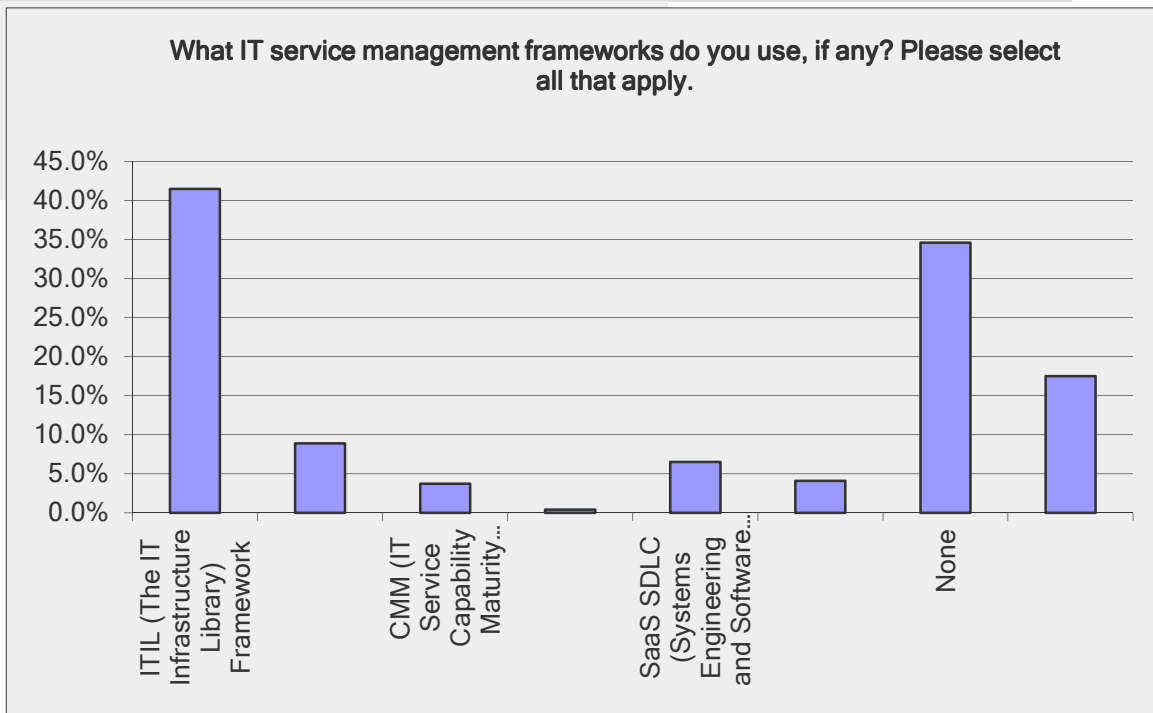
Answer Options	Yes	No	Don't know	Response Count
Do you have a master data management (MDM) policy?	52	174	28	254
Do you have any data governance policies?	119	114	23	256
Do you have practices or procedures in place for reporting on data in the databases?	141	98	17	256
Do you have procedures to follow to keep data for legal reasons?	175	58	22	255
Do you have data quality practices or procedures?	118	112	26	256
Is any data quality work undertaken within your databases?	135	90	31	256
Is there a policy in place to keep historical data for a specific number of years?	180	58	17	255
Is there a management policy for archiving data indefinitely for long term preservation?	135	94	26	255
Do you use/ carry out any data analytical processes?	162	78	16	256
Do you carry out trend and pattern analysis or data mining?	110	126	19	255
Is any crowdsourcing (distributed problem-solving) data used for predictive analysis in	25	198	32	255
Do you have any processes in place for predictive analysis?	46	173	36	255
<i>answered question</i>				<b>257</b>
<i>skipped question</i>				<b>196</b>



## Management of Database Systems

What IT service management frameworks do you use, if any? Please select all that apply.

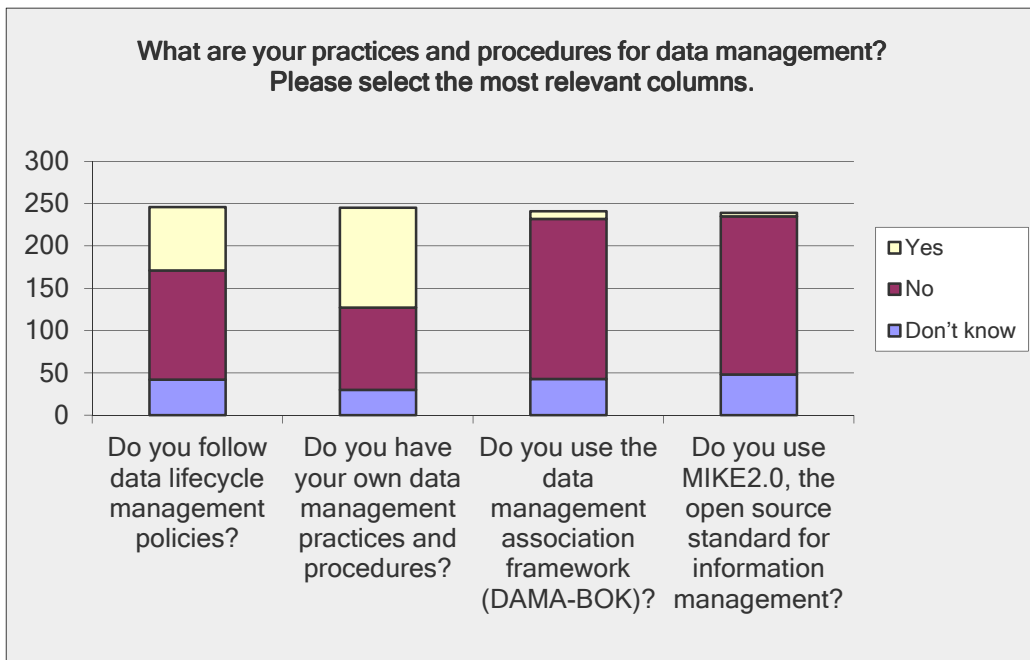
Answer Options	Response Percent	Response Count
ITIL (The IT Infrastructure Library) Framework	41.5%	102
MOF (Microsoft Operations Framework)	8.9%	22
CMM (IT Service Capability Maturity Model )	3.7%	9
FITS (Framework for ICT Technical Support)	0.4%	1
SaaS SDLC (Systems Engineering and Software	6.5%	16
CobiT (Control Objectives for Information and related	4.1%	10
None	34.6%	85
Don't know	17.5%	43
Other, please specify		6
<i>answered question</i>		<b>246</b>
<i>skipped question</i>		<b>207</b>



## Management of Database Systems

What are your practices and procedures for data management? Please select the most relevant columns.

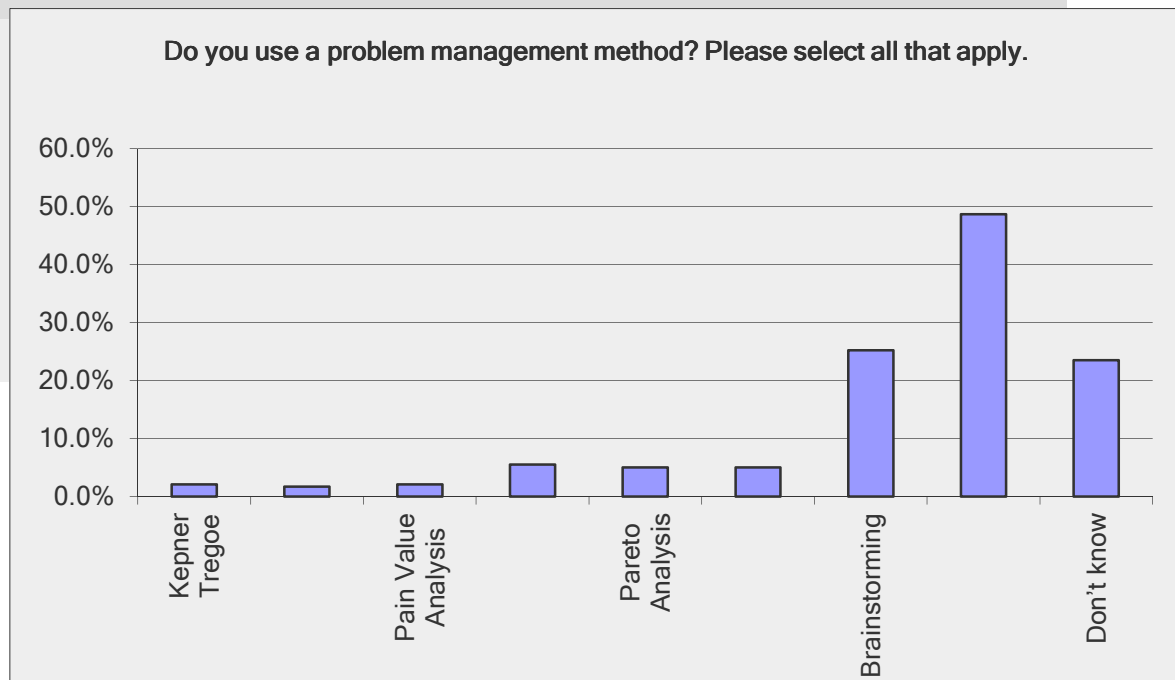
Answer Options	Yes	No	Don't know	Response Count
Do you follow data lifecycle management policies?	75	129	42	246
Do you have your own data management practices and procedures?	118	97	30	245
Do you use the data management association framework (DAMA-BOK)?	9	189	43	241
Do you use MIKE2.0, the open source standard for information management?	4	187	48	239
<i>answered question</i>				<b>246</b>
<i>skipped question</i>				<b>207</b>



## Management of Database Systems

Do you use a problem management method? Please select all that apply.

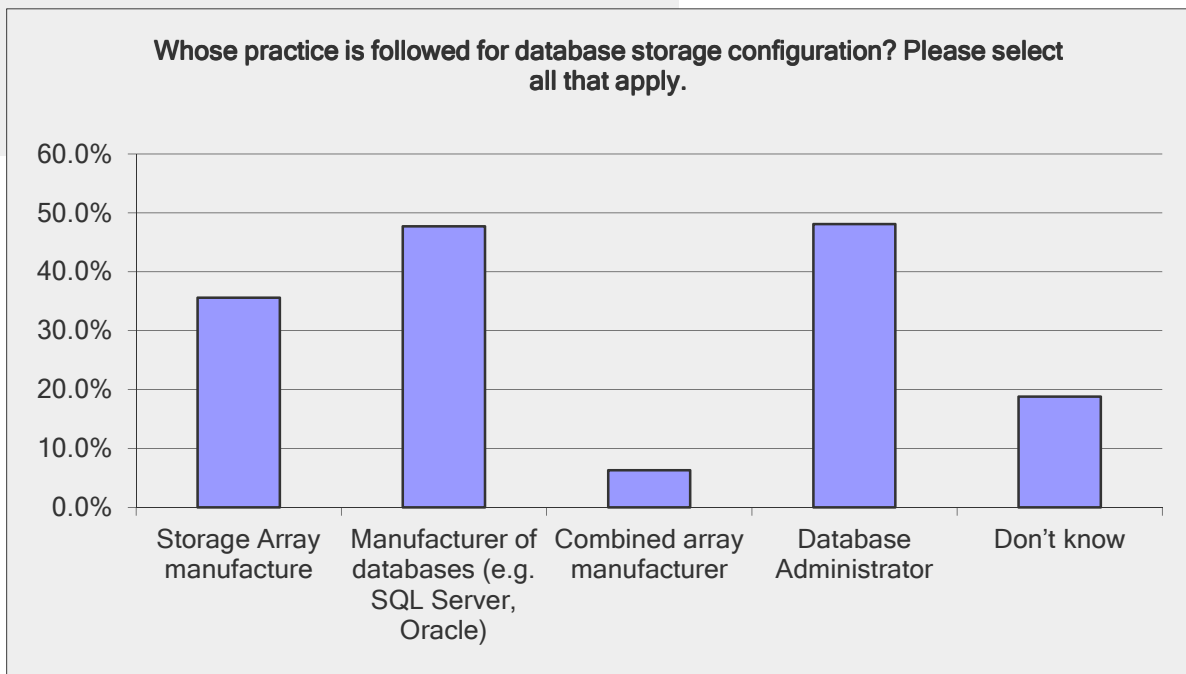
Answer Options	Response Percent	Response Count
Kepner Tregoe	2.1%	5
RPR problem Diagnosis	1.7%	4
Pain Value Analysis	2.1%	5
Chronological Analysis	5.5%	13
Pareto Analysis	5.0%	12
Ishikawa diagrams (fishbone diagrams, cause-and-effect	5.0%	12
Brainstorming	25.2%	60
No, don't use a method	48.7%	116
Don't know	23.5%	56
Other method, please specify		11
<i>answered question</i>		<b>238</b>
<i>skipped question</i>		<b>215</b>



## Management of Database Systems

Whose practice is followed for database storage configuration? Please select all that apply.

Answer Options	Response Percent	Response Count
Storage Array manufacture	35.6%	85
Manufacturer of databases (e.g. SQL Server, Oracle)	47.7%	114
Combined array manufacturer	6.3%	15
Database Administrator	48.1%	115
Don't know	18.8%	45
Other, please specify		5
<i>answered question</i>		<b>239</b>
<i>skipped question</i>		<b>214</b>

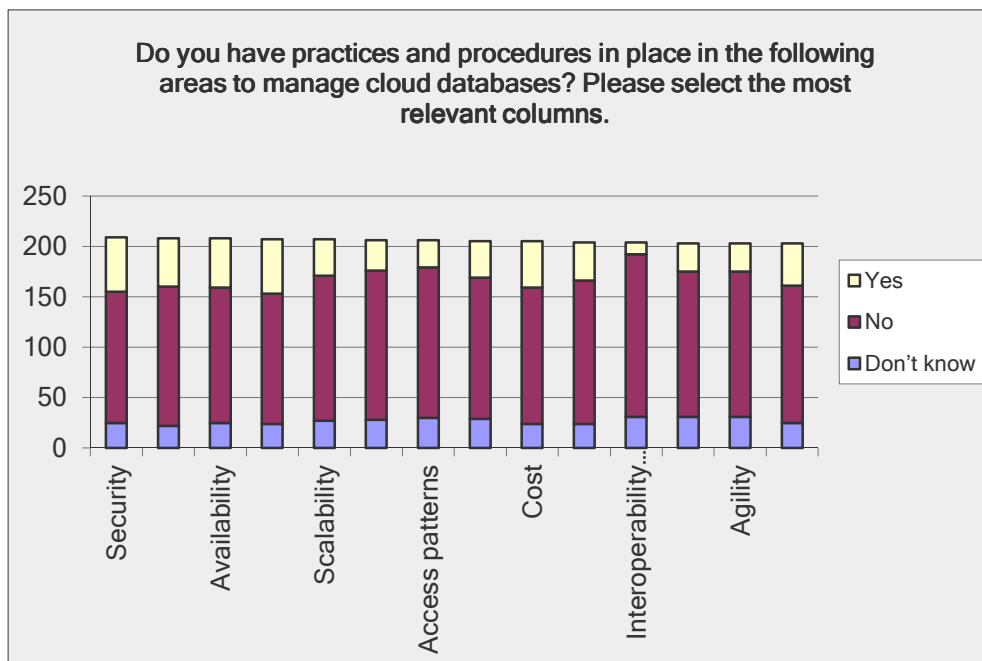




## Management of Database Systems

Do you have practices and procedures in place in the following areas to manage cloud databases?  
Please select the most relevant columns.

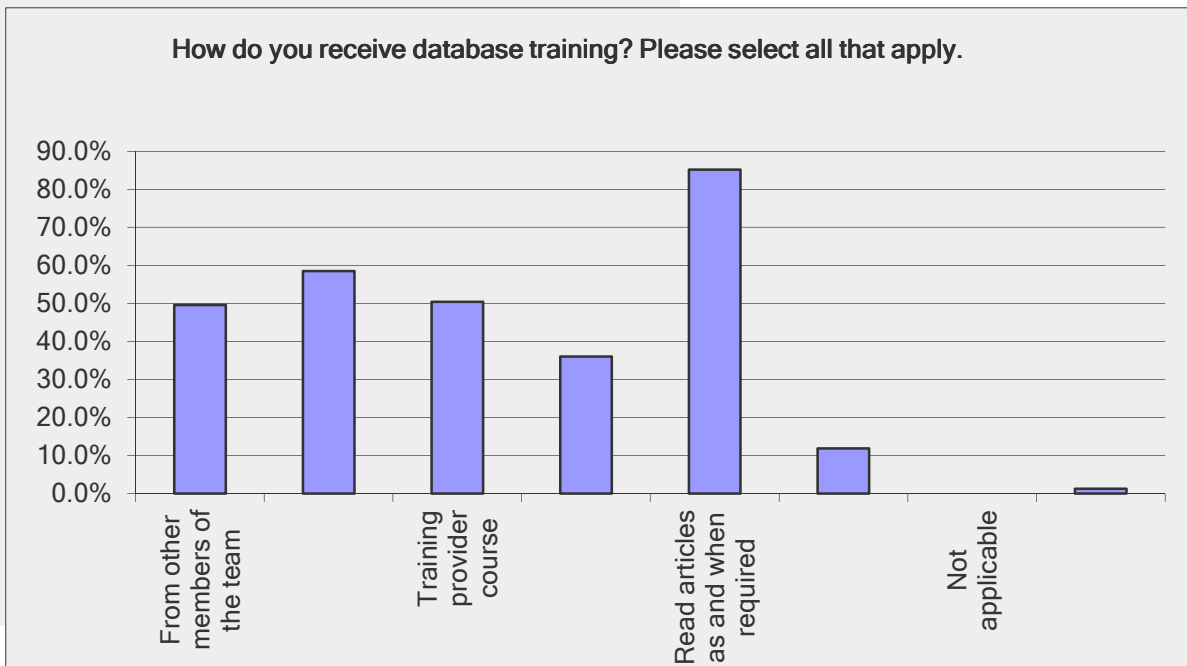
Answer Options	Yes	No	Don't know	Response Count
Security	54	130	25	209
Where the data is stored (e.g. in which country)	48	138	22	208
Availability	49	134	25	208
Recoverability	54	129	24	207
Scalability	36	144	27	207
Expansion and contraction of resources	30	148	28	206
Access patterns	27	149	30	206
Reliability	36	140	29	205
Cost	46	135	24	205
Management tools	38	142	24	204
Interoperability between database vendors	12	161	31	204
Reductions in administration time	28	144	31	203
Agility	28	144	31	203
Control	42	136	25	203
<i>answered question</i>				<b>209</b>
<i>skipped question</i>				<b>244</b>



## Management of Database Systems

How do you receive database training? Please select all that apply.

Answer Options	Response Percent	Response Count
From other members of the team	49.6%	117
External conferences	58.5%	138
Training provider course	50.4%	119
Allocated study time	36.0%	85
Read articles as and when required	85.2%	201
None provided	11.9%	28
Not applicable	0.0%	0
Don't know	1.3%	3
Other, please specify		19
<i>answered question</i>		<b>236</b>
<i>skipped question</i>		<b>217</b>

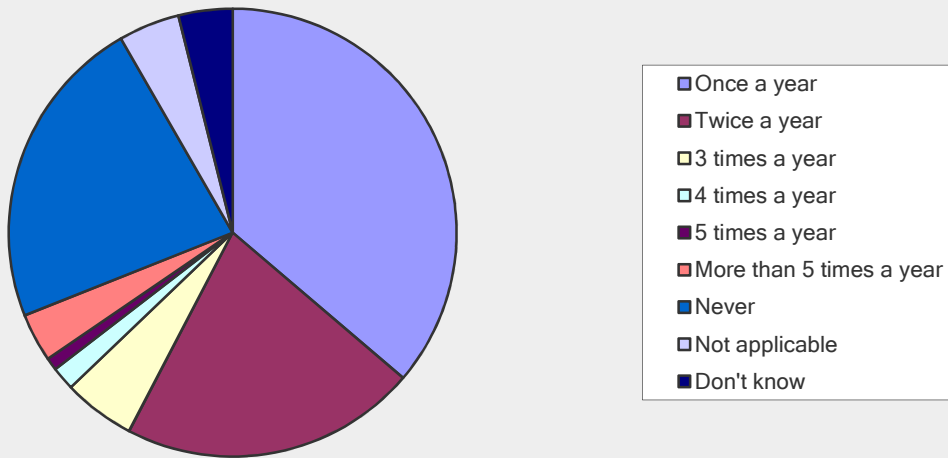


## Management of Database Systems

How often do you have the opportunity to undertake formal training courses? Please select one.

Answer Options	Response Percent	Response Count
Once a year	36.2%	83
Twice a year	21.4%	49
3 times a year	5.2%	12
4 times a year	1.7%	4
5 times a year	0.9%	2
More than 5 times a year	3.5%	8
Never	22.7%	52
Not applicable	4.4%	10
Don't know	3.9%	9
Other, please specify		12
<i>answered question</i>		<b>229</b>
<i>skipped question</i>		<b>224</b>

How often do you have the opportunity to undertake formal training courses?  
Please select one.

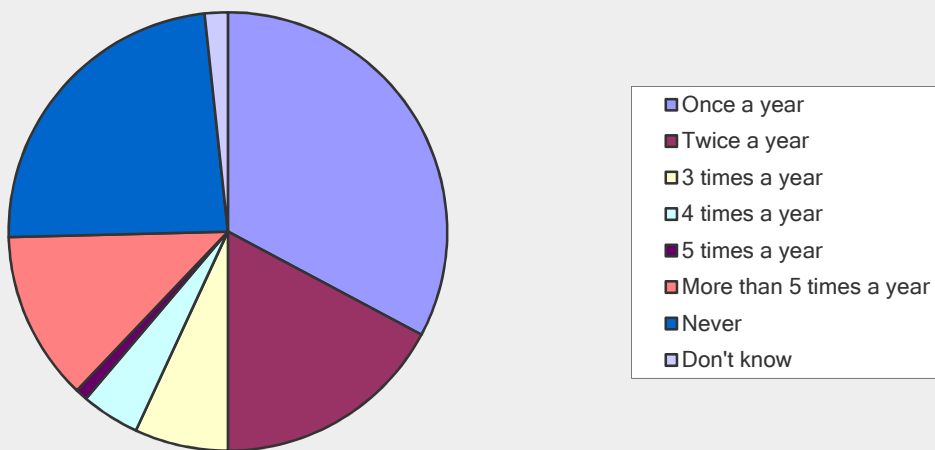


## Management of Database Systems

How often do you have the opportunity to attend database conferences, workshops or seminars? Please select one.

Answer Options	Response Percent	Response Count
Once a year	32.8%	76
Twice a year	17.2%	40
3 times a year	6.9%	16
4 times a year	4.3%	10
5 times a year	0.9%	2
More than 5 times a year	12.5%	29
Never	23.7%	55
Don't know	1.7%	4
Other, please specify		13
<i>answered question</i>		<b>232</b>
<i>skipped question</i>		<b>221</b>

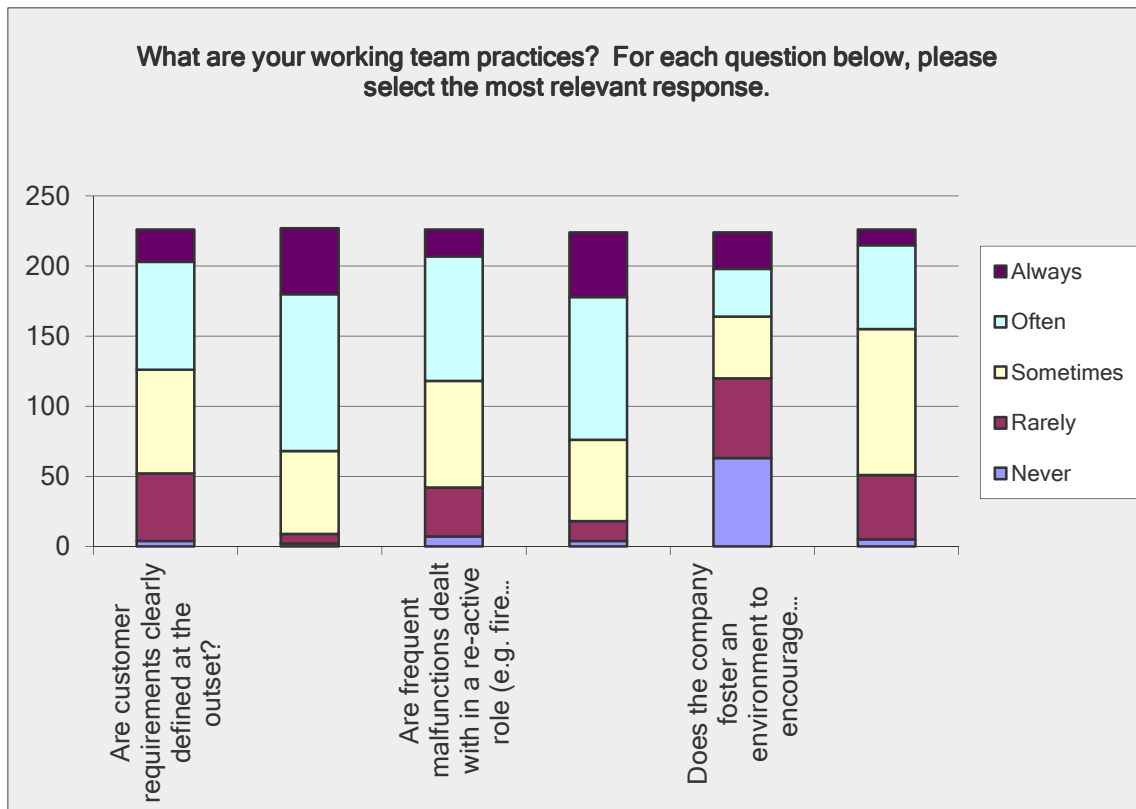
How often do you have the opportunity to attend database conferences, workshops or seminars? Please select one.



## Management of Database Systems

What are your working team practices? For each question below, please select the most relevant response.

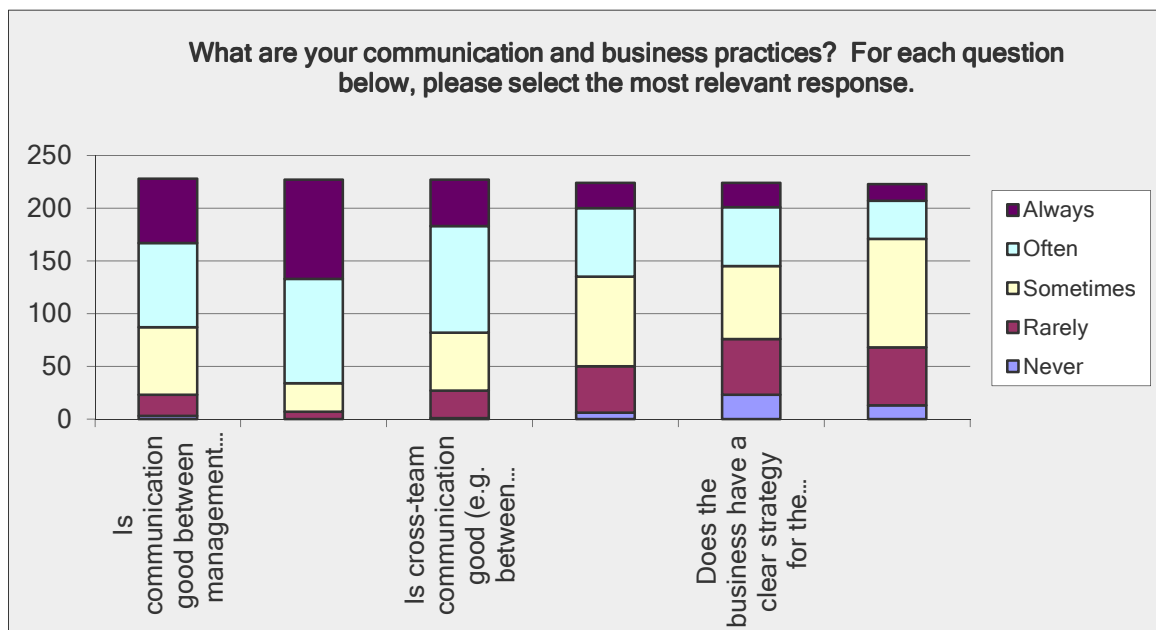
Answer Options	Always	Often	Someti mes	Rarely	Never	Response Count
Are customer requirements clearly defined at the outset?	23	77	74	48	4	226
Do customer requirements change in the midst of projects?	47	112	59	7	2	227
Are frequent malfunctions dealt with in a re-active role (e.g. fire fighting)?	19	89	76	35	7	226
Do you put long term fixes in place for regularly occurring issues to future proof the database applications?	46	102	58	14	4	224
Does the company foster an environment to encourage certification?	26	34	44	57	63	224
Are database management decisions based solely on customer requirements?	11	60	104	46	5	226
<i>answered question</i>						<b>228</b>
<i>skipped question</i>						<b>225</b>



## Management of Database Systems

What are your communication and business practices? For each question below, please select the most relevant response.

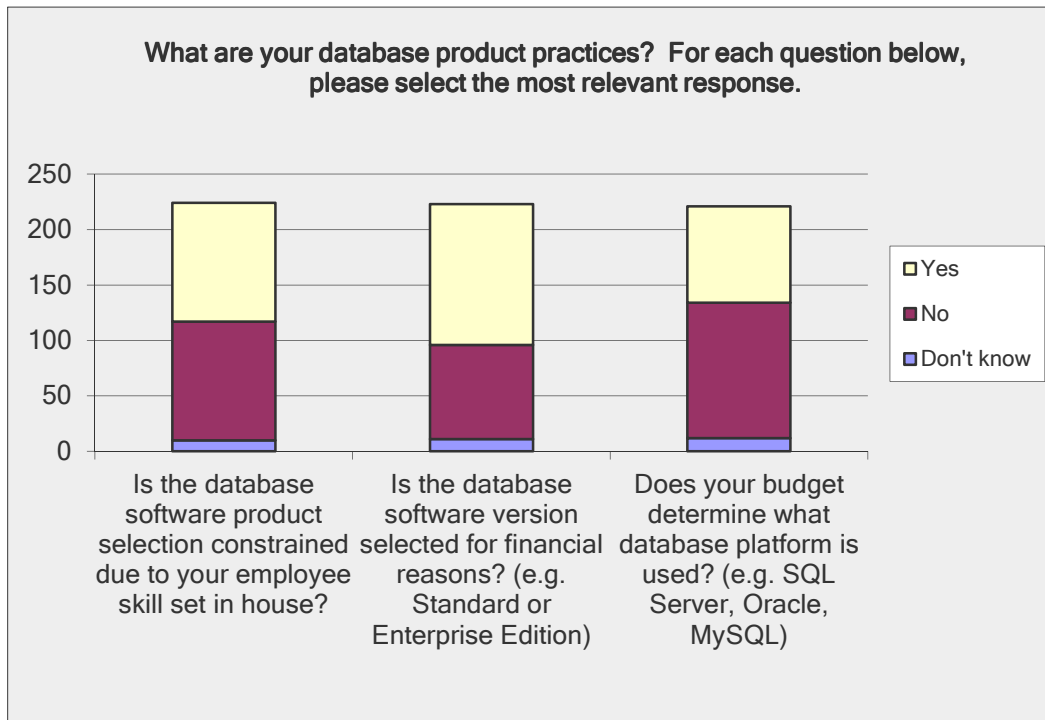
Answer Options	Always	Often	Someti mes	Rarely	Never	Response Count
Is communication good between management and database team members?	61	80	64	20	3	228
Is within-team communication good?	94	99	27	7	0	227
Is cross-team communication good (e.g. between DBA's and service team, development team, storage team etc.)?	44	101	55	26	1	227
Do all the stakeholders communicate (cross boundary communication e.g. customers, database software vendors etc.)?	24	65	85	44	6	224
Does the business have a clear strategy for the database management team, e.g. virtualizing databases, moving databases to the cloud, database consolidation?	23	56	69	53	23	224
Do policy changes to the business model (e.g. disaster recovery plans, volume of disk storage allowed) create risks for database management?	16	36	103	55	13	223
						<i>answered question</i> 228
						<i>skipped question</i> 225



## Management of Database Systems

What are your database product practices? For each question below, please select the most relevant response.

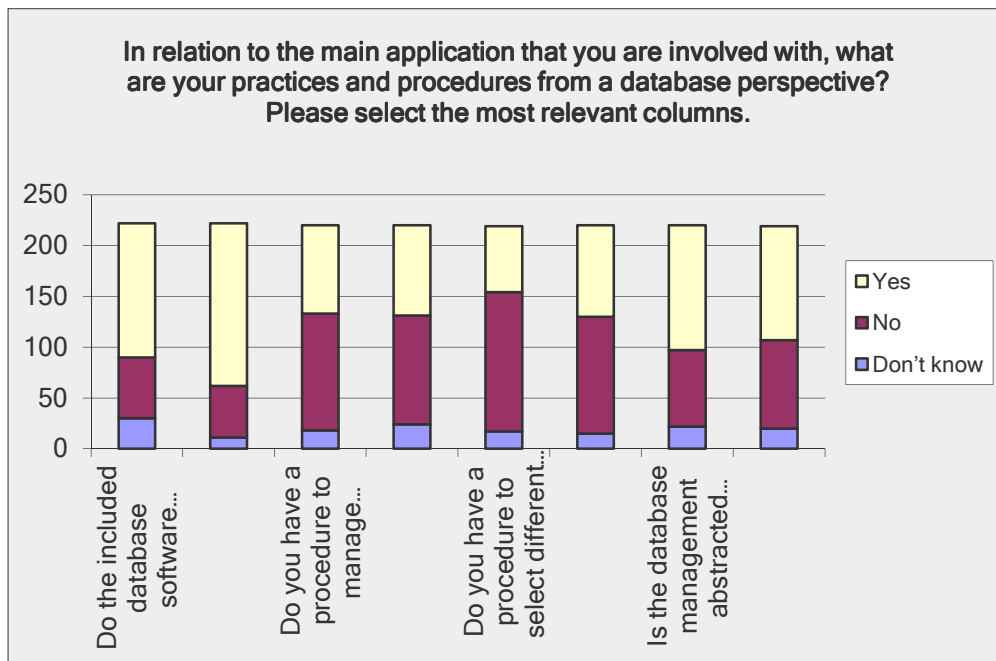
Answer Options	Yes	No	Don't know	Response Count
Is the database software product selection constrained due to your employee skill set in house?	107	107	10	224
Is the database software version selected for financial reasons? (e.g. Standard or Enterprise Edition)	127	85	11	223
Does your budget determine what database platform is used? (e.g. SQL Server, Oracle, MySQL)	87	122	12	221
	<i>answered question</i>			<b>224</b>
	<i>skipped question</i>			<b>229</b>



## Management of Database Systems

In relation to the main application that you are involved with, what are your practices and procedures from a database perspective? Please select the most relevant columns.

Answer Options	Yes	No	Don't know	Response Count
Do the included database software features govern the type of management that can be provided?	132	60	30	222
Is database application scalability a requirement?	160	51	11	222
Do you have a procedure to manage scalability?	87	115	18	220
Do you have an improvement method to follow for database management?	89	107	24	220
Do you have a procedure to select different database engines for the task required?	65	137	17	219
Do you have a procedure to review new database engine changes?	90	115	15	220
Is the database management abstracted from the hardware layer?	123	75	22	220
Do you have a procedure in place for managing virtualized databases?	112	87	20	219
	<i>answered question</i>			<b>223</b>
	<i>skipped question</i>			<b>230</b>



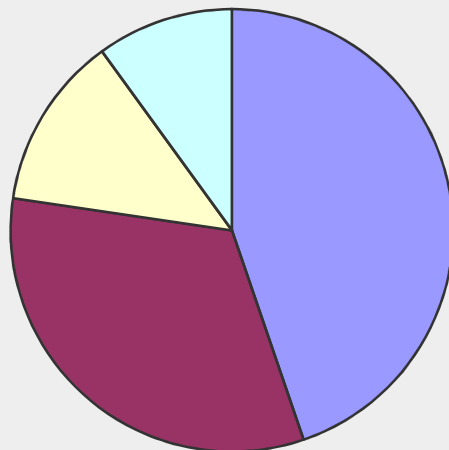


## Management of Database Systems

Do you have different database management practices for different database products e.g. SQL Server, Oracle, MySQL, CouchDB etc.? Please select one.

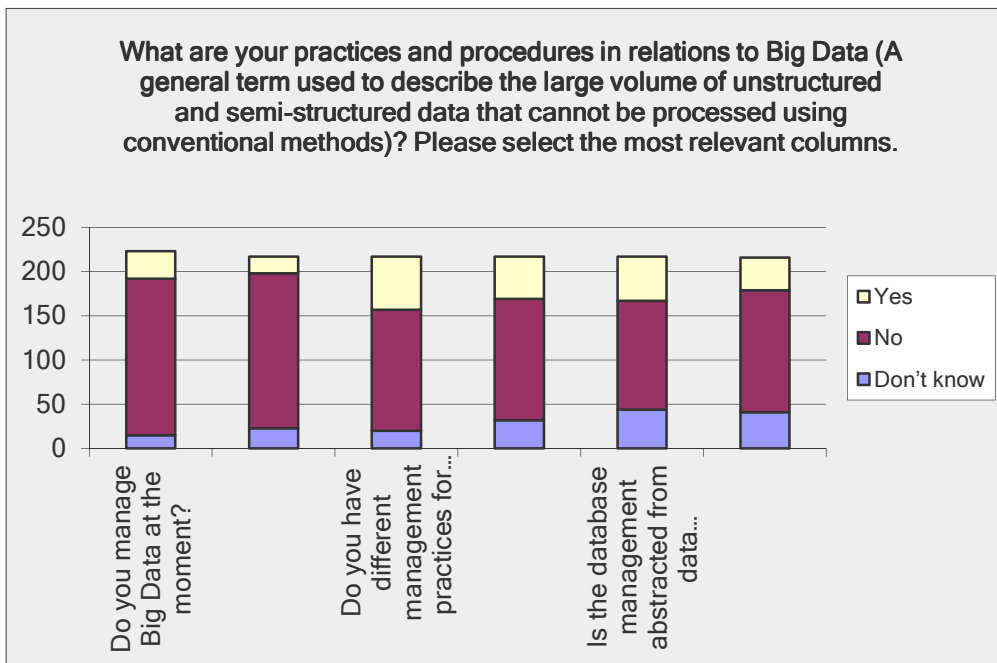
Answer Options	Response Percent	Response Count
Yes	44.8%	99
No	32.6%	72
Sometimes	12.7%	28
Don't know	10.0%	22
Other, please specify		6
<i>answered question</i>		<b>221</b>
<i>skipped question</i>		<b>232</b>

Do you have different database management practices for different database products e.g. SQL Server, Oracle, MySQL, CouchDB etc.? Please select one.



## Management of Database Systems

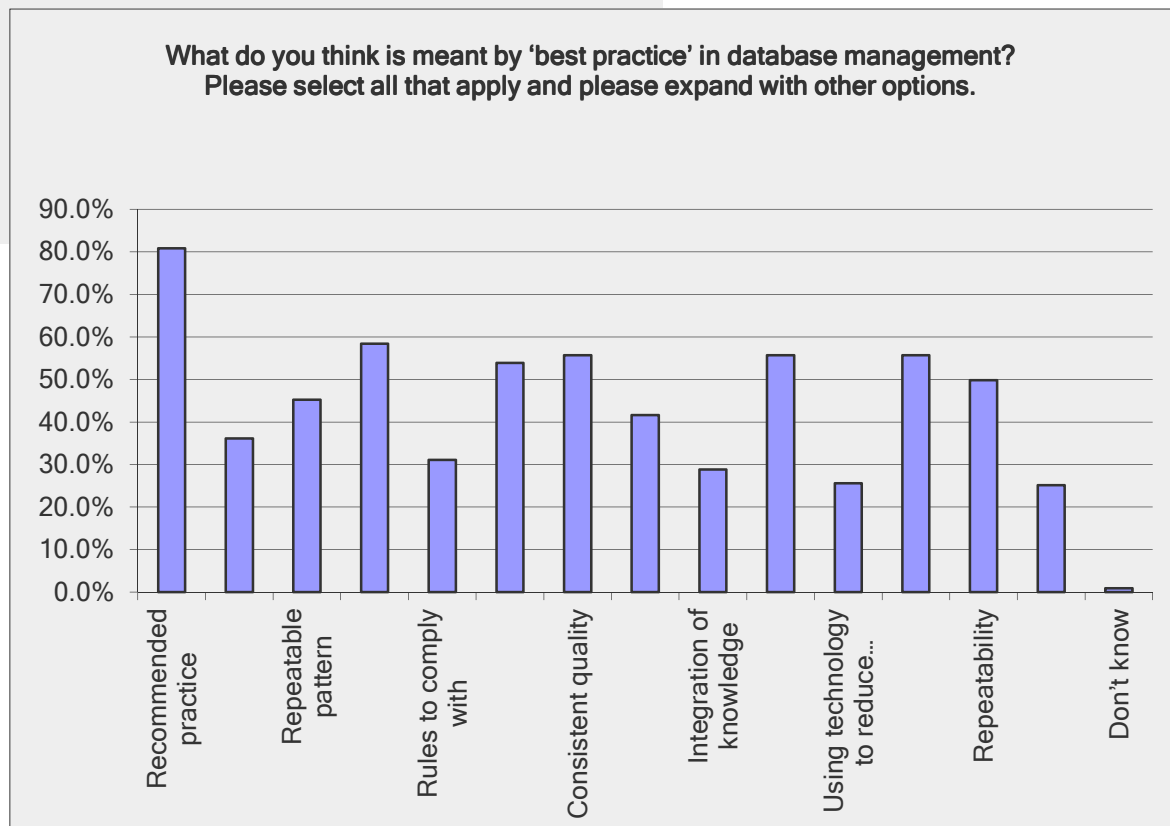
What are your practices and procedures in relations to Big Data (A general term used to describe the large volume of unstructured and semi-structured data that cannot be processed using conventional				
Answer Options	Yes	No	Don't know	Response Count
Do you manage Big Data at the moment?	31	177	15	223
Do you have procedures for managing Big Data?	19	175	23	217
Do you have different management practices for different sizes of database?	60	137	20	217
Do you manage more unstructured data than this time last year?	48	137	32	217
Is the database management abstracted from data management?	50	123	44	217
Does the organization have any processes in place to state which publically available data sets are acceptable to use? (e.g. government data sets)	37	138	41	216
<i>answered question</i>				<b>223</b>
<i>skipped question</i>				<b>230</b>



## Management of Database Systems

What do you think is meant by 'best practice' in database management? Please select all that apply and please expand with other options.

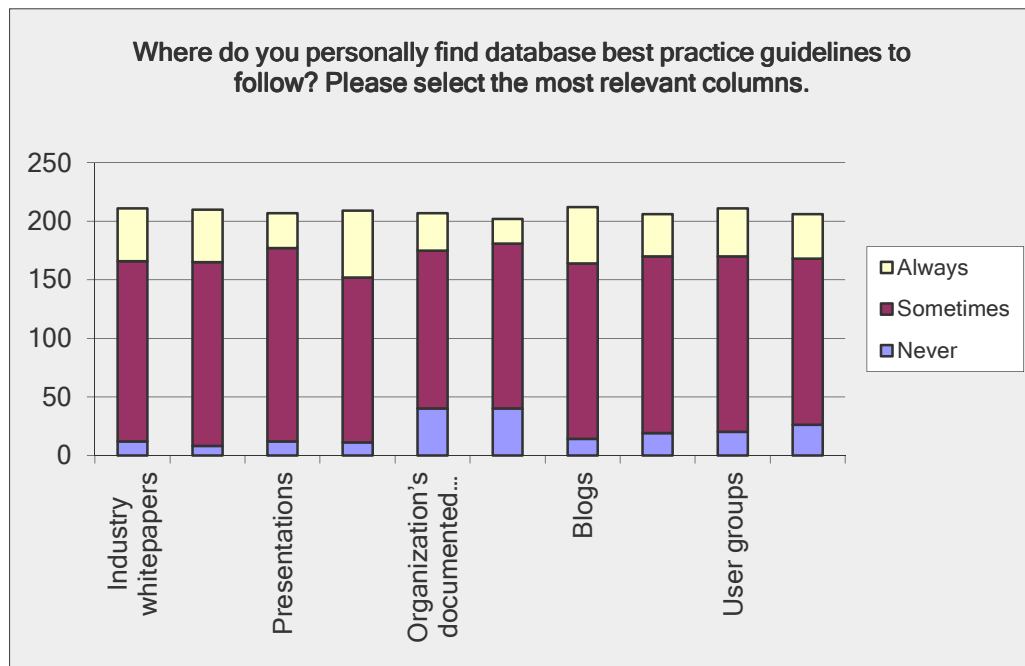
Answer Options	Response Percent	Response Count
Recommended practice	80.8%	177
A framework	36.1%	79
Repeatable pattern	45.2%	99
Procedures to follow	58.4%	128
Rules to comply with	31.1%	68
A methodology	53.9%	118
Consistent quality	55.7%	122
A standard everyone follows	41.6%	91
Integration of knowledge	28.8%	63
Expertise shared	55.7%	122
Using technology to reduce complexity	25.6%	56
Supportability	55.7%	122
Repeatability	49.8%	109
Vendor supported operation	25.1%	55
Don't know	0.9%	2
Please expand further with any other comments		8
<i>answered question</i>		<b>219</b>
<i>skipped question</i>		<b>234</b>



## Management of Database Systems

Where do you personally find database best practice guidelines to follow? Please select the most relevant columns.

Answer Options	Always	Someti mes	Never	Response Count
Industry whitepapers	45	154	12	211
Books	45	157	8	210
Presentations	30	165	12	207
Software vendor websites such as Microsoft	57	141	11	209
Organization's documented procedures	32	135	40	207
Current usage patterns	21	141	40	202
Blogs	48	150	14	212
Colleagues	36	151	19	206
User groups	41	150	20	211
Conferences	38	142	26	206
<i>answered question</i>				<b>219</b>
<i>skipped question</i>				<b>234</b>

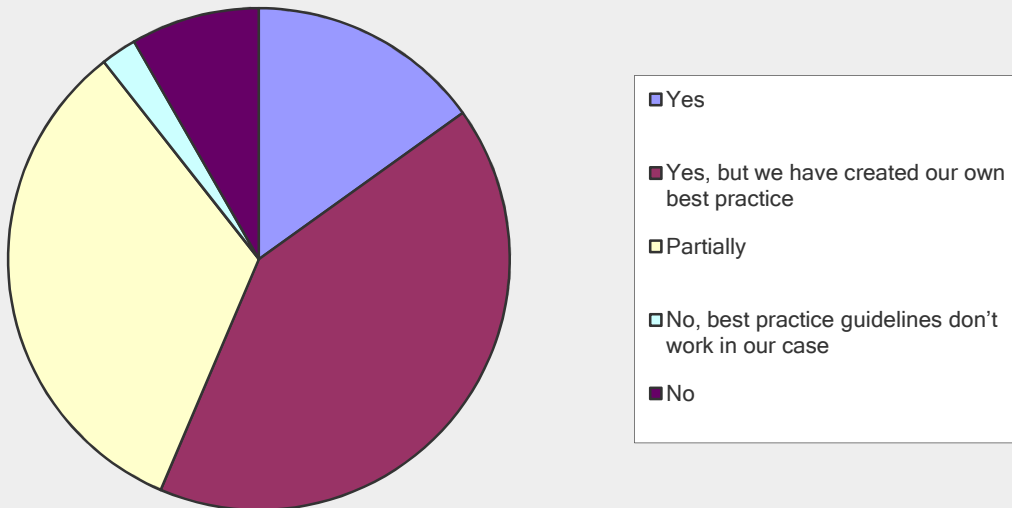


## Management of Database Systems

Does your organization follow any database best practice guidelines? Please select one response.

Answer Options	Response Percent	Response Count
Yes	15.1%	33
Yes, but we have created our own best practice	41.3%	90
Partially	33.0%	72
No, best practice guidelines don't work in our case	2.3%	5
No	8.3%	18
Unknown, or explain further		3
	<b><i>answered question</i></b>	<b>218</b>
	<b><i>skipped question</i></b>	<b>235</b>

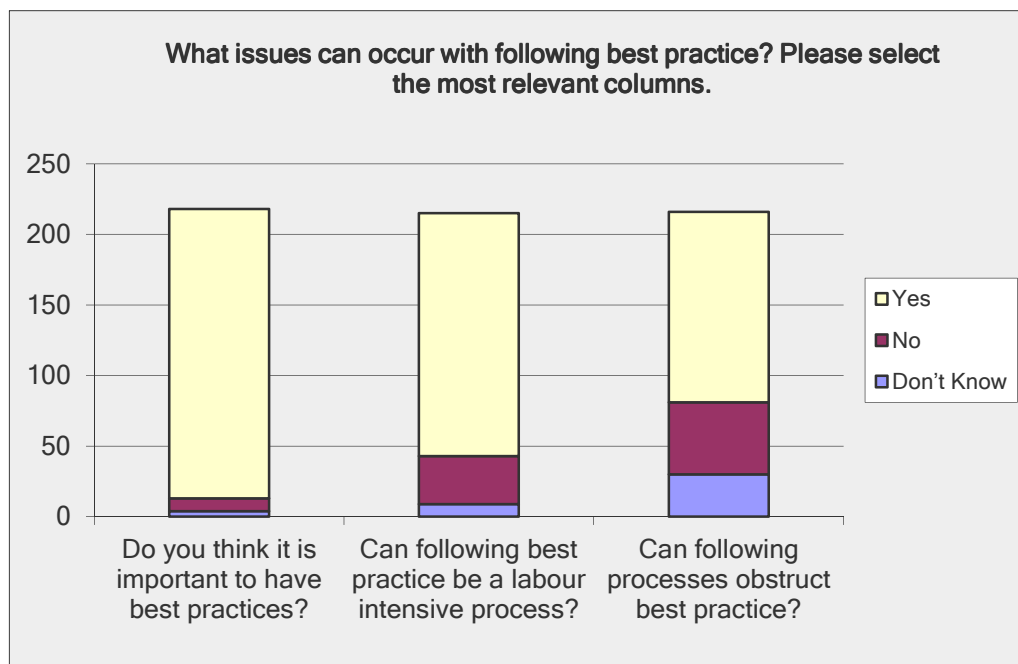
Does your organization follow any database best practice guidelines? Please select one response.



## Management of Database Systems

What issues can occur with following best practice? Please select the most relevant columns.

Answer Options	Yes	No	Don't Know	Response Count
Do you think it is important to have best practices?	205	9	4	218
Can following best practice be a labour intensive process?	172	34	9	215
Can following processes obstruct best practice?	135	51	30	216
	<i>answered question</i>			<b>218</b>
	<i>skipped question</i>			<b>235</b>



## Management of Database Systems

Please select to what extent best practice is currently controlled within your company in each of the following areas? Please select the most relevant column.

Answer Options	Controlled	Partially Controlled	Uncontrolled	Response Count
Database architecture design framework	58	100	53	211
Database development design & database	66	104	41	211
Database security	108	88	15	211
Database maintenance & performance	97	88	27	212
High availability resilience & disaster recovery	104	77	29	210
Data management, data quality & archiving of data	61	105	44	210
Operational service management	68	103	37	208
Virtual & physical infrastructure for databases	95	83	29	207
Database storage configuration & design	91	85	33	209
Cloud database design & security	26	46	121	193
Cloud database service management	24	45	123	192
		<i>answered question</i>		<b>213</b>
		<i>skipped question</i>		<b>240</b>

