



2016 IT Risk/Reward Barometer Global Results

November 2016

www.isaca.org/risk-reward-barometer

Number of respondents (n) = 6,591

Respondents are global business and IT professionals who are members of ISACA.

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1. Which of the following augmented reality applications, if any, has your current workplace used for business purposes in the past year (to the best of your knowledge)? Select all that apply.

Wearable devices (e.g., Google Glass)	4%
Holographic meetings	1%
Remote business applications (e.g., remote diagnostics, remote healthcare, etc.)	15%
Transportation applications (e.g., vehicle HUD, etc.)	4%
Digital navigation tablets (e.g., for warehouse searching efficiency)	4%
Smartphone apps that overlay the camera view with additional information or graphics on top of the real scene	8%
My organization has not used augmented reality applications for business purposes in the past year, and does not plan to use them in the next year	39%
My organization has not used augmented reality applications for business purposes in the past year, but plans to do so within the next year	9%
None of these	20%
Unsure	13%
Other (please specify)	1%

2. What is the biggest barrier, if any, to adopting augmented reality at your organization:

Insufficient budget	14%
Insufficient staff resources	3%
Lack of skills/knowledge from existing staff	14%
Insufficient ROI	17%
Security concerns	16%
There are no barriers	9%
Unsure	23%
Other (please specify)	3%

3. To what extent do you agree or disagree that augmented reality could lead to the following workplace benefits?

	Completely agree	Somewhat agree	Somewhat disagree	Completely disagree	Don't know
New business models/ offerings	29%	48%	8%	2%	13%
Better marketing	24%	46%	11%	3%	16%
Better collaboration	21%	54%	10%	2%	13%
Increased efficiency	18%	56%	10%	3%	13%
Resource optimization	14%	47%	18%	4%	17%
Improved safety	10%	33%	27%	8%	22%
Financial savings	9%	40%	24%	6%	21%

4. Virtual graffiti programs enable individuals to post negative or inappropriate comments about places via augmented reality apps. Does your organization have a program in place to monitor negative comments on augmented reality programs (e.g., virtual graffiti)?

Yes	6%
No	62%
Unsure	31%

5. Does your organization have a way to detect any publicly posted social media posts, picture or videos that are geotagged to your business or tagged to your signage or advertisements and could show up in augmented reality applications that aggregate such information?

Yes	25%
No	41%
Unsure	34%

6. Does your organization have a policy that addresses staff use of augmented reality apps in the workplace?

Yes, we allow them with no restrictions	1%
Yes, and we allow them with limitations	9%
Yes, and we prohibit them	8%
No	63%
Unsure	19%

7. Do the benefits of augmented reality outweigh the risks?

Yes	21%
No	18%
Unsure	61%

8. Which industries do you think will benefit the most from augmented reality? Select all that apply.

Top three responses are bolded.

Financial/Banking	15%
Insurance	10%
Entertainment	61%
Travel	51%
Transportation	32%
Aerospace	32%
Retail	37%
Government/Military	34%
Technology	48%
Manufacturing	25%
Engineering	33%
Telecommunications	27%
Mining/Construction/Petroleum/Agriculture	19%
Utilities	14%
Legal	4%

Real Estate	39%
Healthcare/medical	49%
Marketing/media	53%
Education	55%
Other (please specify)	2%
Unsure	5%

9. How concerned should organizations be about the privacy risks of augmented reality?

Very concerned	51%
Somewhat concerned	36%
Not too concerned	5%
Not at all concerned	1%
Unsure	7%

10. How concerned should consumers be about the privacy risks of augmented reality?

Very concerned	52%
Somewhat concerned	35%
Not too concerned	5%
Not at all concerned	1%
Unsure	6%

11. Have you used augmented reality applications for personal use within the past year?

Yes	16%
No	84%

12. Have you used augmented reality applications for business use within the past year?

Yes	3%
No	97%

13. Do you think your IT department is aware of all of your organization's connected devices (e.g., connected thermostats, TVs, fire alarms, cars, etc.)?

Yes	40%
No	40%
Unsure	19%

14. Does your organization have a policy regarding the use of cloud-based applications without involving IT?

Yes, we allow it	16%
Yes, we prohibit it	48%
No, we do not have a policy regarding putting workloads into the cloud	22%
Unsure	14%

15. Does your organization have a policy regarding staff deploying apps to get their job done?

Yes, we allow it	15%
Yes, we prohibit it	46%
No, we do not have a policy about staff using apps	23%
Unsure	15%

16. What do you think is the likelihood of an organization being breached through an IoT device?

Low	9%
Medium	36%
High	44%
Unsure	11%

17. Which of the following, if any, do you see as significant security concerns for organizations, related to the IoT? Select all that apply.

Vulnerabilities in the device themselves	82%
Data leakage	81%
Access control	75%
Asset management	40%
IoT does not pose any significant security concerns	4%
Other (please specify)	2%

18. To what extent, if any, do you agree or disagree with the following statements about IoT device manufacturers?

	Completely agree	Somewhat agree	Somewhat disagree	Completely disagree
Device manufacturers are implementing sufficient security measures in IoT devices.	4%	28%	43%	25%
Manufacturers make consumers sufficiently aware of the information that IoT devices can collect.	5%	24%	39%	32%

19. Is your organization maximizing the potential of the data it collects through IoT devices/applications?

Yes	9%
No	50%
Unsure	41%

Demographics

20. In what country/territory do you live? (n = 6,501; responses are rounded to the nearest hundredth)

United States	37.51%
Canada	5.70%
United Kingdom	5.58%
India	4.33%
Australia	2.88%
Germany	2.48%
Japan	2.22%
Hong Kong	2.20%
Netherlands	2.02%
Spain	1.83%
South Africa	1.62%
Singapore	1.60%

Italy	1.57%
Nigeria	1.23%
Switzerland	1.14%
United Arab Emirates	1.02%
Kenya	1.00%
Philippines	0.89%
Sweden	0.85%
Poland	0.74%
Ireland	0.72%
Finland	0.65%
Hungary	0.62%
Belgium	0.60%
France	0.60%
Mexico	0.60%
Brazil	0.58%
Malaysia	0.57%
Saudi Arabia	0.55%
Greece	0.54%
Austria	0.48%
Indonesia	0.48%
Romania	0.48%
China	0.46%
Turkey	0.43%
Zimbabwe	0.43%
Argentina	0.42%
New Zealand	0.42%
South Korea	0.42%
Ghana	0.40%
Colombia	0.35%
Croatia	0.35%
Czech Republic	0.32%
Peru	0.32%
Luxembourg	.31%
Bulgaria	0.29%
Denmark	0.29%
Pakistan	0.29%
Puerto Rico	0.29%
Norway	0.28%
Oman	0.28%
Malta	0.25%
Costa Rica	0.23%
Russia	0.23%
Slovenia	0.23%
Lithuania	0.22%
Qatar	0.22%

Serbia	0.22%
Sri Lanka	0.22%
Trinidad and Tobago	0.22%
Cyprus	0.20%
Lebanon	0.20%
Mauritius	0.20%
Israel	0.18%
Uganda	0.18%
Cameroon	0.17%
Jamaica	0.17%
Kuwait	0.17%
Portugal	0.17%
Slovakia	0.17%
Taiwan	0.17%
Bahrain	0.15%
Chile	0.15%
Latvia	0.15%
Bangladesh	0.14%
Curacao	0.14%
Dominican Republic	0.14%
Thailand	0.14%
Zambia	0.14%
Ecuador	0.12%
Egypt	0.12%
Kazakhstan	0.12%
Botswana	0.11%
Former Yugoslav Republic of Macedonia	0.11%
Ukraine	0.11%
Jordan	0.09%
Namibia	0.09%
Bermuda	0.08%
Macau	0.08%
Nicaragua	0.08%
Tanzania	0.08%
Venezuela	0.08%
Vietnam	0.08%
Estonia	0.06%
Honduras	0.06%
Uruguay	0.06%
Bolivia	0.05
El Salvador	0.05
Malawi	0.05
Moldova	0.05
Mozambique	0.05
Nepal	0.05

Albania	0.03%
Andorra	0.03%
Azerbaijan	0.03%
The Bahamas	0.03%
Barbados	0.03%
Belize	0.03%
Benin	0.03%
Ethiopia	0.03%
Georgia	0.03%
Guatemala	0.03%
Morocco	0.03%
Panama	0.03%
Papua New Guinea	0.03%
Rwanda	0.03%
Senegal	0.03%
Tunisia	0.03%
Afghanistan	0.02%
Algeria	0.02%
Angola	0.02%
Antigua and Barbuda	0.02%
Armenia	0.02%
Aruba	0.02%
Bhutan	0.02%
Bosnia and Herzegovina	0.02%
Burma	0.02%
Cambodia	0.02%
Democratic Republic of the Congo	0.02%
Cote d' Ivoire	0.02%
Cuba	0.02%
Iceland	0.02%
Laos	0.02%
Micronesia	0.02%
Mongolia	0.02%
Saint Lucia	0.02%
Syria	0.02%
Togo	0.02%
Turks and Caicos	0.02%
Uzbekistan	0.02%

21. In what region do you live? (n = 6,501)

Asia-Pacific	16%
Europe	25%
Middle East	3%

Africa	6%
Latin America (Mexico, Central America, South America)	4%
North America	43%
Oceania (Australia, New Zealand, Papua New Guinea)	2%

22. In what industry do you work? (n = 6,501)

Financial/Banking	25%
Insurance	6%
Public accounting	3%
Transportation	2%
Aerospace	0%
Retail/Wholesale/Distribution	3%
Government/Military	9%
Technology Services/Consulting	21%
Manufacturing/Engineering	5%
Telecommunications/Communications	4%
Mining/Construction/Petroleum/Agriculture	3%
Utilities	2%
Legal/Law/Real Estate	1%
Healthcare/Medical	4%
Pharmaceutical	1%
Advertising/Marketing/Media	1%
Education/Student	3%
Other	7%

23. How many people are employed in your enterprise, including all branches, divisions and subsidiaries? (n = 6,501)

Fewer than 50	9%
50-149	6%
150-499	9%
500-1,499	12%
1,500-4,999	17%
5,000-9,999	10%
10,000-14,9	6%
15,000 or more	32%

24. Which of the following is closest to your job title? (n = 6,501)

Student	0%
External consultant	10%
Professor/teacher	1%
Practitioner	13%
Supervisor	9%
Manager	33%
Director	10%
Vice president	4%
CIO/CISO/CAE	7%
President/CEO	2%
Other	12%

25. Please select your gender. (n = 6,501)

Female	22%
Male	75%
Prefer not to answer	3%

26. Please select your age group. (n = 6,501)

Less than 20 years old	0%
20 to 25 years old	1%
26 to 30 years old	7%
31 to 35 years old	16%
36 to 40 years old	17%
41 to 45 years old	17%
46 to 50 years old	14%
51 to 55 years old	12%
56 to 60 years old	8%
61 to 65 years old	4%
66 to 70 years old	1%
71 years old or older	0%
Prefer not to answer	3%

About ISACA's 2016 IT Risk/Reward Barometer

The annual IT Risk/Reward Barometer is a global indicator of trust in information. Conducted by ISACA, a global association of more than 140,000 IT security, assurance, risk and governance professionals, the Barometer polls thousands of business and IT professionals and consumers worldwide to uncover attitudes and behaviors about essential technologies and information, and

the trade-offs people make to balance risk and reward. The study is based on online polling of 6,591 ISACA members among 140 countries from 19-29 September 2016. Additional online surveys were fielded by M/A/R/C Research among 1,230 consumers in the US, 1,000 consumers in the UK, 1,000 consumers in Australia, 1,001 consumers in India and 1,000 consumers in Singapore. The US survey ran 6-8 August 2016, and the UK, Australia, India and Singapore surveys ran 12-23 August 2016. At a 95 percent confidence level, the margin of error for each individual country sample is +/- 3.1 percent.

To see the full results, visit www.isaca.org/risk-reward-barometer.

Note: Due to rounding to the nearest whole number, responses may not add up to 100%.