KPMG

Investment in technology innovation

What tech companies are investing in, how much, and the expected timing for ROI

The investment rankings

Responses to KPMG's 2019 Technology Industry Innovation Survey yielded the following rankings of transformative technologies.

	Greatest potential for transformation and long-term value creation	Investing in now	Plan to invest in three years from now
1	Internet of Things (IoT)	Internet of Things (IoT)	Internet of Things (IoT)
2	Robotic process automation (RPA)	Artificial intelligence	Robotics (including autonomous vehicles)
3	Artificial intelligence	Robotic process automation (RPA)	Artificial intelligence
4	Blockchain; tie 4th	Robotics (including autonomous vehicles)	Blockchain
5	Robotics (including autonomous vehicles); tie 4th	Augmented reality	Robotic process automation (RPA)
6	Augmented reality	Blockchain	Virtual reality
7	Virtual reality	Social networking, collaboration technologies	Biotech, digital health, genetics
8	Social networking, collaboration technologies	Biotech, digital health, genetics	Social networking, collaboration technologies
9	Biotech, digital health, genetics	Virtual reality	On Demand platforms
10	On Demand platforms	On Demand platforms	Augmented reality

Source: KPMG Technology Industry Innovation Survey 2019

Tech companies walk the walk

KPMG's report, Top 10 technologies for business transformation, outlined the technologies that respondents to our 2019 Technology Industry Innovation Survey believe have the greatest potential to drive future business transformation and long–term value. Follow-up questions asked which technologies their companies are actually investing in now, and which ones they plan to invest in three years from now.

Amazingly, given about 20 different choices, respondents chose the same top 10 technologies for each list. Internet of Things (IoT) reigned in all three lists and artificial intelligence (AI) ranked no less than third. Robotic process automation (RPA) and robotics (including autonomous vehicles) placed in the top five in each list. Blockchain rounded out the top five. These consistent results show that tech companies are indeed "walking the walk" and investing in technologies they believe to be transformative.

The road to funding new technology, however, can be long and winding. Challenges often include unproven business cases, technology complexity, lack of workforce skills, and integration with legacy systems. Budgeting for capital investments is also typically an annual process, including heavy governance and controls. This traditional approach doesn't support fast pivots or allow a business to quickly capitalize on innovation opportunities.

KPMG's report, Funding technology at market speed, calls for dynamic investment. In this new model, the funding process is continual and flexible. It enables the enterprise to shift capital among various technology bets. It encourages experimentation, failing fast, and redeploying capital during the fiscal year. It requires a new mind-set among all functions. The report outlines five key considerations for corporate leaders:

1. **Fund value instead of projects**
2. **Adopt lean funding; keep the technology portfolio current**
3. **Embrace the decentralization of Information Technology**
4. **Catch bad ideas faster**
5. **Communicate transparency and value**

Large tech enterprises leveraging their scale

How much are tech companies investing in innovation driven by emerging technologies? The survey results indicate that many companies–even large enterprises, are only moderately investing in innovation ($0-$9.9 million). However, some tech giants, flush with cash, have the means to invest at the high end ($500 million or more annually) compared to mid-market tech companies and startups. These companies have the resources to place many bets and take more risks. They expect that they won't all pay off but know that the learnings may still prove valuable.

Smaller companies have less money available to invest and thus much less room for error. They need to manage their portfolios and investments in a very disciplined and structured manner. Historically, one misplaced bet or missed product cycle can have disastrous effects. Yet by employing the principles of dynamic investing, they may be able to level the playing field with their larger brethren.

Annual innovation investment by company size

	Startup	Mid-Market	Large Enterprise
$0–$9.9M	84%	59%	40%
$10M–$99.9M	14%	32%	28%
$100M–$499.9M	0%	3%	11%
$500M+	1%	6%	18%

Source: KPMG Technology Industry Innovation Survey 2019

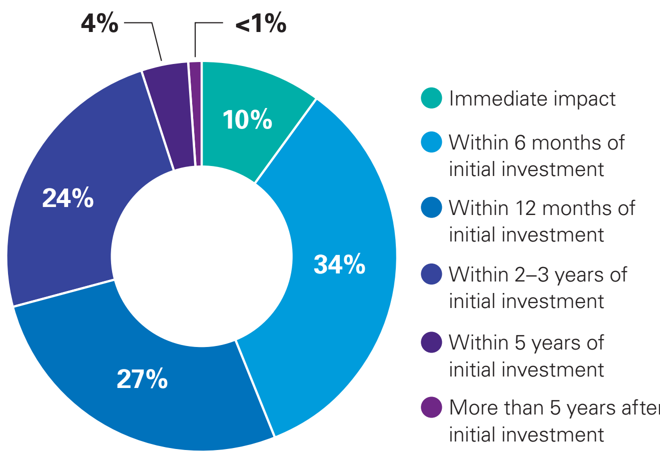
Tech companies expect quick ROI

Tech companies know well the mantra "disrupt or be disrupted." This explains the aggressive expectation for achieving significant return on investment (ROI) on innovative technologies. Overall, 44 percent of respondents expect significant ROI within the first six months, and a total of 71 percent within the first year.

Overall, in large enterprises that can scale operations faster, 80 percent expect to realize significant ROI in the first 12 months. In mid-market tech companies, 69 percent have this expectation. And in startups, it's 64 percent.

From a geographic perspective, companies in Taiwan expect the fastest ROI with 83 percent of respondents expecting significant returns within the first 12 months. German respondents were second with 80 percent, followed by the United Kingdom at 78 percent. China and the United States were closer to the average at 71 percent and 70 percent, respectively.

Expectation for significant ROI on innovative technology investment



Source: KPMG Technology Industry Innovation Survey 2019

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About the research

The 2019 KPMG Technology Industry Innovation Survey included responses from over 740 technology industry leaders across 12 countries. The online survey was conducted between December 2018 and January 2019. Percentages in charts may not equal 100 percent due to rounding.