

Standish Predictions for 2021



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Abstract

In this paper we present our annual predictions. The first three predictions in this report were created by Jim Johnson and The Standish Group but were influenced by surveys and interviews of leading technology executives, including a few from the Boston CTO Club, that sought their views on what is on the horizon for 2021. The rest of the predictions are direct from more than 50 executives responded, and below are some of their thoughts. (Because the surveys were returned prior to the recent announcements of vaccines for Covid-19, many of the replies focus around a future vaccine, and this was taken into consideration.

Prediction #1: Infinite Flow

The Standish Group predicts Infinite Flow will take hold in replacing “projects” as a method of software development. This will happen slowly—but it will happen, as more organizations see the cultural and economic advantages of the Flow method. Infinite Flow is a continuous process based around a small team that produces a daily delivery of progressive improvements informed by four different levels of feedback and collaboration. These four levels create a cultural advantage that we describe as a “happiness circle” involving the sponsor, the team, the

stakeholders, and the users. Infinite Flow has a very low management and governance overhead of 15%-20%, compared to the 80% overhead commonly experienced with the standard “project management. With such a substantial economic advantage expected, The Standish Group is predicting that eventually, 80%-85% of software will be developed in a Flow-like environment. Flow is the future. For more information on Infinite Flow go to www.standishgroup.com/infiniteflow.



Prediction #2: Healthcare Research Convergence

The Standish Group also predicts that the major employment and investment opportunities for 2021 reside in the convergence between three distinct areas: healthcare research, data science, and artificial intelligence. This convergence will eventually produce life-saving products and behavioral changes, as well as a whole host of new companies that will spring up to service this burgeoning commercial area. It will also require a whole new set of skills—skills that will benefit from teams that can work in a highly collaborative way. These teams will require people with advanced degrees in cellular or molecular biology, chemistry, biochemistry,

microbiology, data science, artificial intelligence, and other related disciplines. Teammates familiar with the Crispr/Cas9 gene engineering tool will be in demand and will command higher compensation. Let's call these companies "HIROs" (Health Intelligent Research Organizations). HIROs will partner with, and later merge with, large pharmaceutical and biotechnology companies. The breakthroughs from HIROs might include discoveries in the fields of research and treatments for cancer as well as heart and brain diseases. They will also be at the forefront of discovery and research into potential pandemics.



Prediction #3: iBike

The Standish Group predicts the breakthrough consumer products for 2021 will feature the development of Personal Transportation Devices (PTDs). The star of 2021's PTDs will be a self-driving bicycle, which will be similar to the mock-up depicted in this funny video:

<https://youtu.be/LSZPNwZex9s>.

We believe it will be developed and offered by Apple and, of course, will be called the "iBike." To accomplish this, Apple will buy [Segway](#) for their gyro technology, which will improve the iBike's stability. Apple will also

buy [Trek](#) for their expertise and capability in manufacturing high-quality bicycles. The iBike will be a standard pedal bike—not a downgraded moped—that will be able to operate in electric power assist mode for uphill travel or when the rider gets tired. Its battery will last 40 to 50 miles in autopilot or rider assist mode, and it will recharge while the bike is in standard pedal mode. And, of course, the bike's self-driving capability will come via an app on the iPhone. Other PTD breakthroughs will include single-person drones and jetpacks.



Question 1: What will be the breakthrough technology for 2021?

While Covid-19 vaccines and biometrics won the day, it is clear from the replies that drones, and their uses, were not far behind. Many of our respondents imagined drones for delivering packages, for discoveries, for security, for law enforcement, and even for personal transportation. Another foreseen set of innovations involved automation of cars and motorcycles—as well as drones. Robotics, 5G, AI, and advancements in data science rounded out the breakthrough technologies. Digital twin, blockchain as a service, and IoT are also likely to see significant

advancements. (In fact, IoT patches were mentioned as a way to track and trace COVID vaccinated and non-vaccinated patients.) Health tech, in general, is ripe for many breakthroughs. There also was a high concentration of both security and privacy products and services. In fact, one respondent suggested that in 2021 pressure from government regulators and consumers will build to replace passwords with more secure and private methods of identification and authentication. Another respondent speculated that 2021 will be a year of widespread DDoS attacks.



Question 2: What will be the hottest—and coldest—jobs in 2021?

Biotech jobs in general top the list. “Data scientist” was the single most mentioned individual non-biotech hot job—by a landslide. Other hot jobs involved AI, machine learning, and virtual event planning for intra-company events. There will also be high demand for cybersecurity analysts and engineers. Learning Python could enhance your career, and blockchain experts and engineers were also mentioned. Digital transformation specialists were in the running, as well as other types of business and process architects. A couple of people mentioned UX designers. One of the most interesting submissions was “vaccine freezer-truck drivers”—which would be a near-term hot job,

but would then turn cold as the vaccine is rolled out (pun intended).

One area of debate over hot and cold jobs involved knowledge of historical computer languages that support legacy applications. The list of “cold jobs” included people in the travel/entertainment industry, as well as technical writers, workers in enterprise desktop support and general administration and employees in on-premises retail as well as financial customer services. “Project managers” had a few respondents thinking on the “cold” side—and our prophets also think that political consultants and pollsters should start thinking about a new career.



Question 3: What will be the fastest and slowest growth markets in 2021?

Products in health tech—both individual and institutional—should have a banner year, say our futurists. This includes digital health (precision medicine, genomics, medical devices, and general life-science products). Delivery services will continue to be strong, given the arrival of the Covid vaccine, but online buying will continue at a great pace given the past year as well as the fact that people are getting used to online purchases of grocery and other products that they might have gone out for in the past. Telemedicine is here to stay, and it will provide revenue to health workers who had planned to retire. AI, blockchain, data sciences, cybersecurity, data privacy, process

intelligence, digital-twin services, and dry ice all look like they will have a good year. Fintech was highlighted as a growth area by a few of the respondents. The future of travel is ambiguous: once the pandemic is over, will people flock to airports and cruise ships? Certainly, work has changed forever—job seekers may have come to prefer work-from-home employment. Meanwhile, people looking for retail and office space will find huge pickings as well as bargains. (This was already a trend, as many malls have turned into warehouse space.) One respondent suggested that smaller IT budgets will depress the market as a whole.



Question 4: What are your comments on acquisitions, mergers, and divestitures?

Amazon was on the minds of many of the respondents. They gave me the impression that Amazon is the Godzilla that swallowed the world, including Wall Street real estate. Their targets may include (again, pun intended) Target, CVS, and Walgreens, to name a few. Some more-novel possible acquisitions included CNN and the US Postal Service. Newspapers up for grabs could include *The Wall Street Journal*

and *The New York Times*. A few commenters suggested that Google might buy Zoom and sell YouTube (maybe to Amazon). The idea that Oracle and SAP might join forces was another honorable mention; maybe we should throw HPE into the same mix. However, combining these three should remind you of the old joke about hooking three dead horses together to increase speed.



Question 5: What will be the most overused term or acronym for 2021?

The winner here is “TEAM”—whether it’s used as an acronym (“Together Everyone Achieves More”), a saying (“There is no ‘I’ in ‘team’”), or a mere word. “Let’s have a team meeting over Zoom” is right up there; in fact “Zoom” is the runner-up to “team,” coupled with “fatigue” or “burnout.” Coming in third—and last year’s number one—is AIML (Artificial Intelligence Machine Learning).

Other overused words and phrases included “blockchain,” “disruption,” “sanitizing,” “low code,” and “5G.” (We’ll admit that “Flow” achieved honorable-mention status.) Another interesting one was “Just Do it.” (I had been saying this for years before Nike took it up as their marketing slogan. Maybe it’s catching on.) The word “cure” could be in the running, given the pandemic. “Brain drain” may apply to organizations with

mainframes and legacy applications. Other honorable mentions included “quantum computing,” “as a service (aaS),” and “edge cloud.”

I have come up with a new acronym: AUM. It stands for Artificial Useless Measurement. Where software “projects” are concerned, here are some AUMs you might be familiar with: cost, time, target, lines of code, and function points. Where Scrum is concerned, you might consider “velocity” as an AUM. Why? None of these measurements involve value or customer satisfaction. So from now on, when you see an AUM, just call it out. You can pronounce it “um.” Say it out loud so everyone can hear you. Let’s make AUM the most overused acronym for 2021. Let’s start counting the things that really count.



Summary

A few days ago, after a team made a process change to improve efficiency, a client wrote to ask, "But why the change? We have always done it the old way." To a futurist like me, that's the sound of fingernails on a chalkboard, and it drives me right up the wall. Our industry is all about the future; we create change and do not accept what's been done in the past as "good enough."

These predictions are things that might happen, but our work is meant to make life better through advancements and improvements. We never stop changing. We never stop looking to the future. We are agents and champions of change!

Jim Johnson

Jim Johnson is the founder and chairman of The Standish Group. He has a combination of technical, marketing, and research achievements focused on mission-critical applications and technology. He is best known for his research on project performance and early recognizing technology trends. Jim is a pioneer of modern research techniques and continues to advance in the research industry through case-based analytical technology.

