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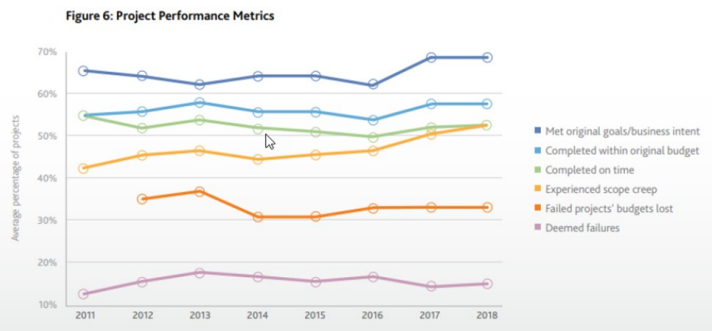
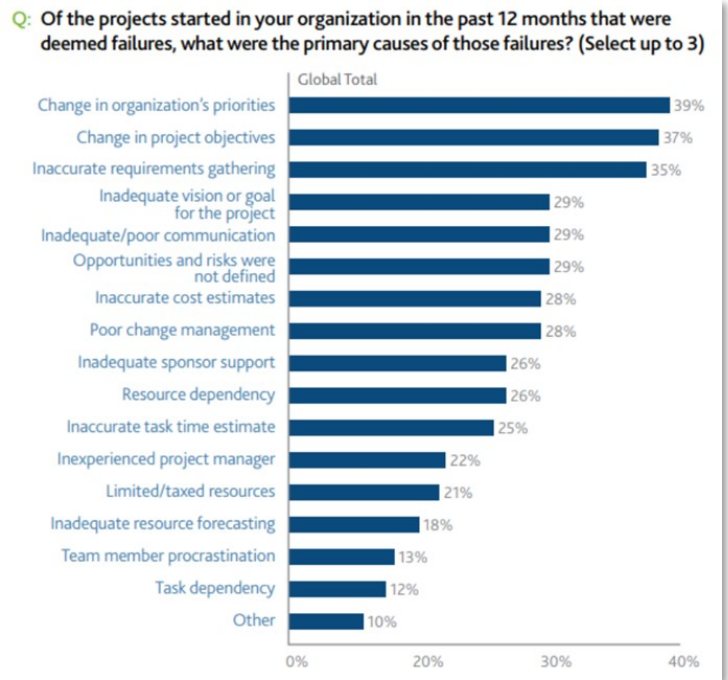
Project Management Stats: Part Two

As promised last month, here is Part 2 of "Project Management Statistics: 45 Stats You Can't Ignore". Part 1 of this article appeared in the February 2020 Practitioner.

Project Management Performance Statistics: What is the average failure rate of a project? Does failure rate vary by project and industry? Among successful projects, what factors have the biggest impact on success?

We'll answer some of these questions in the project management statistics below.

- The top five causes of project failure are:
- Change in the organization's priorities (39%)
- Change in project objectives (37%)
- Inaccurate requirements gathering (35%)
- Inadequate vision (29%)
- Poor communication (29%)
- Project performance has been rising globally. In 2018, nearly 70% of projects met their original goals or business intent, while nearly 60% were completed within the original budget. Both these figures are up from 62% and 50% respectively in 2016. (PMI)



- Compared to 2017, 71% of organizations reported a lack of funding as their top project management challenge, while 49% more organizations reported an inconsistency in approach. (Wellington)
- IT projects are notoriously difficult to manage. A survey published in HBR found

Continued on next page

Project Management Stats: Part Two (continued)

Continued from previous page

that the average IT project overran its budget by 27%. Moreover, at least one in six IT projects turns into a “black swan” with a cost overrun of 200% and a schedule overrun of 70%. In other words, while most IT projects will fall short of their budget targets, a few might overshoot the targets so much as to cause catastrophic organization-wide problems. KMart’s massive \$1.2B failed IT modernization project, for instance, was a big contributor to its bankruptcy. (HBR)

- Poorly training project managers, attempting too many projects, and a lack of project funding are the top three project management challenges in Wellington’s survey. (Wellington)



- Among IT projects, failure rate corresponds heavily to project size. An IT project with a budget over \$1M is 50% more likely to fail than one with a budget below \$350,000. For such large IT projects, functionality issues and schedule overruns are the top two causes of failure (at 22% and 28% respectively). (Gartner)

The performance of different types of IT projects varies significantly.

% of IT projects with given issue (for those with budgets >\$15 million in 2010 dollars)

Project type	Average cost overrun	Average schedule overrun	Average benefits shortfall
Software	66	33	17
Nonsoftware	43	3.6	133
Total	45	7	56

Source: McKinsey-Oxford study on reference-class forecasting for IT projects

- A PwC study of over 10,640 projects found that a tiny, tiny portion of companies – 2.5% – completed 100% of their projects successfully. The rest either failed to meet some of their original targets or missed the original budget or deadlines. These failures extract a heavy cost – failed IT projects alone cost the United States \$50-\$150B in lost revenue and productivity. (Gallup)
- Investing in proven PM processes and methodologies pays off. According to CIO, organizations that use proven PM practices waste 28x less money than their more haphazard counterparts. (CIO)

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Continued on next page

Project Management Stats: Part Two (continued)

Continued from previous page

- Rework is a big cause of project failure and a significant source of delays. 80% of respondents in a Geneca survey said that they spend half their time on rework. (Geneca)
- Poor stakeholder-project manager alignment is a big cause of project failure. Only 55% of people involved in projects – team leaders and project managers – feel that the project’s business objectives are clear to them. More than 80% also feel that the requirements process doesn’t articulate the needs of the business. And when the project is wrapped up, only 23% of respondents say that project managers and stakeholders are in agreement when a project is done. (Geneca)
- To give you an idea of the abysmal success rate of most projects, only 40% of projects at IBM meet the company’s three key goals – schedule, budget, and quality. (IBM)
- Among IT projects, project performance varies significantly. While software projects have an average cost overrun of 66%, the same figure for non-software projects is 43%. However, 133% of non-software projects fail to meet their stated benefits, compared to just 17% for software projects. (McKinsey)

Project Management Training Statistics

A sureshot way to improve project performance is to invest in intensive training. This includes training for PM fundamentals as well as ancillary skills related to project management – leadership, communication, soft skills, etc.

We’ll look at some project management statistics related to training below.

- Soft skills are increasing in importance for project managers. 51% of respondents in PMI’s 2018 survey said that soft skills are more important today, while only 19% said that this skill requirement is unchanged. (PMI)
- Technical and leadership skills remain the most important priorities for top-performing organizations. 81% of these organizations prioritize the development of technical skills (vs 13% of underperformers), 79% prioritize leadership skills, and 70% focus on developing strategic and business management skills. (PMI)

Figure 4: Champions Make Investments in Project Management Talent



- Despite low maturity levels, only 48% organizations have invested in accredited project management training. 15% use non-accredited training or courses, while more than 25% don’t invest in any training at all. (Wellingtone)
- The success of the PMO often lies in its approach to training. 60% of PMOs now have a formal project management training program, up

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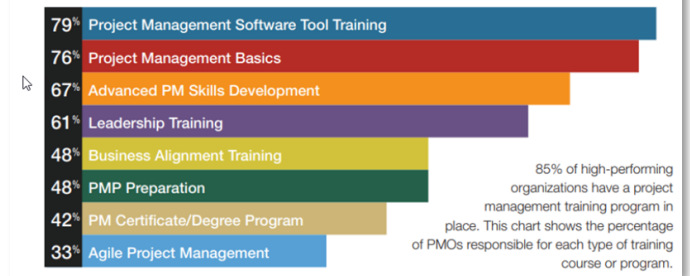
Project Management Stats: Part Two (concluded)

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from 11% in 2014. Incidentally, high-performing organizations are far more likely to have a training program than low performers (85% vs 38%). On average, these organizations spent 5 days per year in training. (PMSolutions)

- Most PMOs (79%) offer onsite, classroom-based training using in-house trainers. However, a significant – and growing – number (51%) are now relying on external trainers for onsite classes as well. Larger organizations are also more likely to use on-demand, online training. (PMSolutions)
- High-performing organizations use a variety of PM training strategies. 79% use PM software tool training, 76% offer training on PM basics, 67% offer advanced PM skills development, and 61% offer leadership training. (PMSolutions)

High Performers Offer Variety of Project Management Training



It is not one world

In this country, most of industry is requirement and rule based. And while we often complain about the rules and the associated cost, it is sometimes good to pause and take a look at what our industry could look like without regulation.

PDWG Goings-On

Upcoming events:

- ASU Maturity Study Core Team sixth meeting in DC, March 2020 **Face-to-face cancelled – substituted with telecom/video conferencing*
- PM-30 Project Management Workshop Meeting in DC, April 2020 **Cancelled*

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Just for Fun: March's Notable Events and Famous Birthdays

1 — The Salem witch hunt began (1692), the Articles of Confederation were ratified (1781), Yellowstone Park was established (1872), actor/director Ron Howard was born (1954), and the Peace Corps was established (1961)

2 — Congress abolished the African slave trade (1807), Texas declared its independence from Mexico (1836), author Dr. Seuss was born (1904), and Wilt Chamberlain scored an NBA-record 100 points in a game and rocker Jon Bon Jovi was born (1962)

3 — Congress passed the Missouri Compromise (1820), inventor Alexander Graham Bell was born (1847), the first U.S. wartime draft was approved (1863), the first indoor hockey game was played (1875), Rutherford B. Hayes became president (1877), and "The Star-Spangled Banner" officially became America's national anthem (1931)

4 — The first session of the U.S. Congress was held (1789), Abraham Lincoln became president (1861), football pioneer Knute Rockne was born (1888), Woodrow Wilson became president (1913), FDR became president (1933), and comedian John Candy died (1994)

5 — The Boston Massacre took place (1770), Soviet leader Joseph Stalin died (1953), and the Hula-Hoop was patented (1963)

6 — Painter Michelangelo was born (1475), the Battle of the Alamo ended (1836), the Dred Scott case was decided (1857), aspirin was patented (1899), and basketball star Shaquille O'Neal was born (1972)

7 — Alexander Graham Bell patented the telephone (1876), and Hitler sent troops to the Rhineland in violation of the Treaty of Versailles (1936)

8 — The first U.S. Marines arrived in Vietnam (1965), Joe Frazier beat Muhammad Ali in the "Fight of the Century" (1971), **"Beavis and Butthead" premiered on MTV** (1993), and a Malaysia Airlines jet vanished with more than 200 people aboard (2014)



9 — Cosmonaut Yuri Gagarin (1934) and chess wizard Bobby Fischer (1943) were born, the Barbie doll debuted (1959), the first Adopt-a-Highway sign appeared (1985), comedian George Burns died (1996), and rapper The Notorious B.I.G. was killed (1997)

10 — The telephone first transmitted speech (1876), tough guy Chuck Norris (1940), actress Sharon Stone (1958) and singer Carrie Underwood (1983) were born, disco singer Andy Gibb died (1988), and "Buffy the Vampire Slayer" debuted (1997)

11 — The Army Corps of Engineers was established (1779), the Confederate constitution was adopted (1861), the first cases of the flu pandemic were reported (1918), and Paul McCartney was knighted (1997)

12 — FDR's first "fireside chat" was broadcast (1933), Germany annexed Austria (1938), singer James Taylor was born (1948), and Janet Reno became the first female attorney general (1993)

13 — The planet Uranus was discovered (1781), President Andrew Johnson's impeachment trial began (1868), and the Army established its K-9 Corps (1942)

14 — Albert Einstein (1879) and actor/comedian Billy Crystal (1948) were born, and 22 members of the U.S. boxing team were killed in a plane crash (1980)

15 — Roman emperor Julius Caesar was murdered (44 BC), President Andrew Jackson was born (1767), Maine became a state (1820), **Bobby Orr became the first NHL defenseman to score 100 points in a season** (1970), "The Godfather" opened in theaters (1972), and actress Eva Longoria was born (1975)



16 — President James Madison was born (1751), the U.S. Military Academy was established (1802), the first liquid-fueled rocket was successfully launched and actor/comedian Jerry Lewis was born (1926), and actor Erik Estrada was born (1949)

17 — St. Patrick died (461), the British evacuated Boston (1776), and automotive pioneer Gottlieb Daimler (1834), golfer Bobby Jones (1902), and actors Kurt Russell (1951) and Rob Lowe (1964) were born

18 — President Grover Cleveland was born (1837), Wells Fargo was established (1852), a natural gas explosion at a Texas school killed nearly 300 students (1937), and the War Relocation Authority was established (1942)

19 — Western artist Charles Russell was born (1864), the first U.S. air combat mission in was flown (1916), Nevada legalized gambling (1931), actress Glenn Close was born (1947), the Academy Awards were first shown on TV (1953), actor Bruce Willis was born (1955), and Operation Iraqi Freedom began (2003)

20 — The Black Death plague broke out in Europe (1345), the Republican Party was formed (1854), **TV's Mr. (Fred) Rogers was born** (1928), and terrorists attacked a Tokyo subway with nerve gas (1995)



21 — Composer J.S. Bach was born (1685), the first rock concert was held (1952), Alcatraz Prison closed (1963), the Alabama Freedom March began (1965), and the U.S. announced its boycott of the Summer Olympics and soccer star Ronaldinho was born (1980)

22 — The Stamp Act was imposed on the American colonies (1765), the first Stanley Cup championship was played (1894), Western novelist Louis L'Amour was born (1908), actor William Shatner was born (1931), the Arab League was formed (1945), sportscaster Bob Costas was born (1952), the Equal Rights Amendment was passed by the Senate (1972), and a mudslide at Oso, Washington, killed 43 people (2014)

23 — Lewis & Clark began their journey back to the Midwest from the Pacific Coast (1806), actress Joan Crawford was born (1904), the Fascist party was founded (1919), and actress Elizabeth Taylor died (2011)

24 — Magician Harry Houdini (1874) and actor Steve McQueen (1930) were born, Elvis Presley was inducted into the Army (1958), football star Payton Manning was born (1976), the Exxon Valdez ran aground in Alaska and spilled 11 million gallons of oil (1989), astronaut Shannon Lucid became the first woman to live in a space station (1996), and a school shooting in Jonesboro, Arkansas, killed five people (1998)

25 — A fire in the Triangle Shirtwaist factory killed 146 workers (1911), singers Aretha Franklin (1942) and Elton John (1947) were born, the European Economic Community was founded (1957), race car driver Danica Patrick was born (1982), the last U.S. troops departed Somalia (1994)

26 — Poet Robert Frost (1874) and actor Leonard Nimoy (1931) were born, the polio vaccine was announced (1953), star athletes Marcus Allen (1960) and John Stockton (1962) were born, and a peace agreement between Israel and Egypt was signed (1979)

27 — **Oregon beat Ohio State to win the first ever NCAA men's basketball tournament** (1939), Nikita Khrushchev became premier of the Soviet Union (1958), director Quentin Tarantino (1963) and singer Mariah Carey (1970) were born, and the FDA approved Viagra (1998)



28 — San Francisco was founded (1776), singer Reba McEntire was born (1955), General/President Dwight D. Eisenhower died (1969), the Three Mile Island nuclear disaster occurred (1979), and the Baltimore Colts moved to Indianapolis (1984)

29 — President John Tyler (1790), baseball star Cy Young (1867), basketball star Walt Frazier (1945) and football star Earl Campbell (1955) were born, the last U.S. combat troops departed from Vietnam (1973), and Mariner 10 became the first space probe to land on Mars (1974)

30 — Artist Vincent Van Gogh was born (1853), the U.S. bought Alaska from Russia (1867), the 15th Amendment granting African-American men the right to vote was adopted (1870), guitarist Eric Clapton (1945), rapper M.C. Hammer (1962) and singer Celine Dion (1968) were born, and President Ronald Reagan was shot (1981)

31 — The Eiffel Tower opened (1889), hockey legend Gordie Howe (1928), actor Christopher Walken (1943) and former vice-president Al Gore (1948) were born, the longest major league baseball strike ended (1995), and The Matrix opened in theaters (1999)