



# Project Management and Project Management Professional (PMP) Overview

By Mairaj Ahmed

myProTraining.com

# Agenda

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- Definitions
- Common PM Methodologies
- PMP Overview
- PMP Knowledge Areas

# DEFINITIONS

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# Project, Product & Operations

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- **Project:**

An initiative that has a specific purpose and will create specific results. It has a definite start and finish date, therefore (unlike operations), it is temporary.

Example: Project to create a software

- **Product:**

An article or substance that is manufactured or refined for sale. The deliverable of a Project

Example: The software created

- **Operations:**

Ongoing work for supporting business and systems of an organization

Example: Ongoing Software support

# Project Management

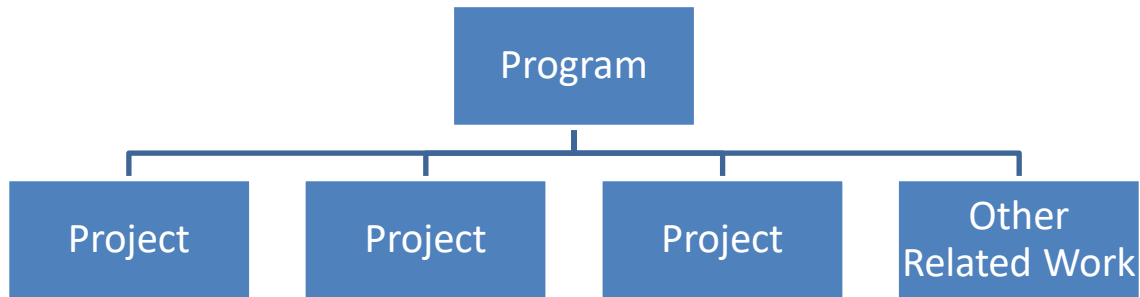
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Application of information, skills, tools and techniques to tasks involved with a project in order to meet project needs.

# Program and Portfolio

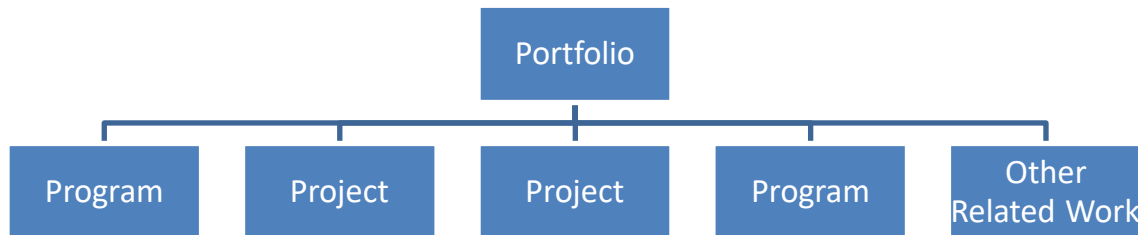
- **Program:**

This encompasses projects of similar work or correlated activities managed in a coordinated way to attain benefits that could not be achieved separately.



- **Portfolio:**

A group of projects and/or programs that have some degree of interactivity related to an overall strategic business goal (for e.g. funding, type of project, etc.)



# Example

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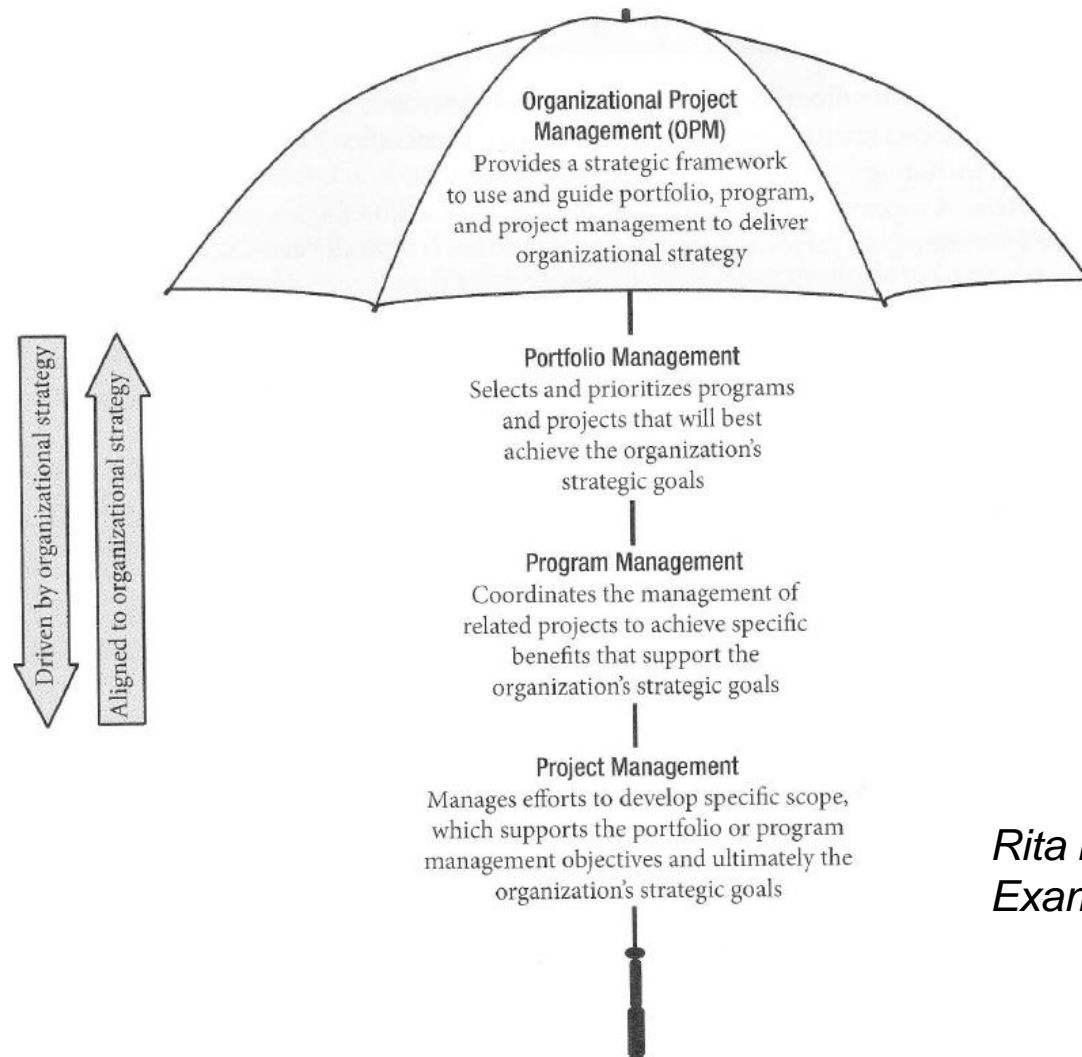
Portfolio: Boeing 777 series

Program: Building Boeing 777-300er

Project: Building Boeing 777-300er's engines

Operations: Maintenance of Boeing 777-300er

# OPM-Portfolio-Program-Project Mgmt



*Rita Mulcahy's PMP  
Exam Prep – 8<sup>th</sup> Edition*



# Life Cycles

- **Project Management Lifecycle:**

The following 5 Process Groups constitute the PM Lifecycle:

- Initiating
- Planning
- Monitoring & Controlling
- Executing,
- Closing

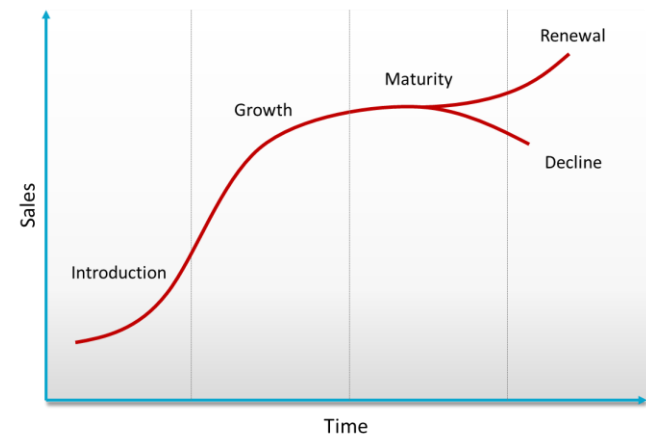
- **Project Lifecycle:**

The process of completing work on a project is called Project Lifecycle. It is not Project Management of the work, but rather the work process such as building process for constructing a house. This lifecycle typically co-exists with the Project Management Lifecycle.

- **Product Life Cycle:**

This involves the product of service from concept to divestment (closure). Four main stages of this are:

- Market introduction stage
- Growth stage
- Maturity stage
- Saturation and decline stage



# COMMON PROJECT MANAGEMENT METHODOLOGIES

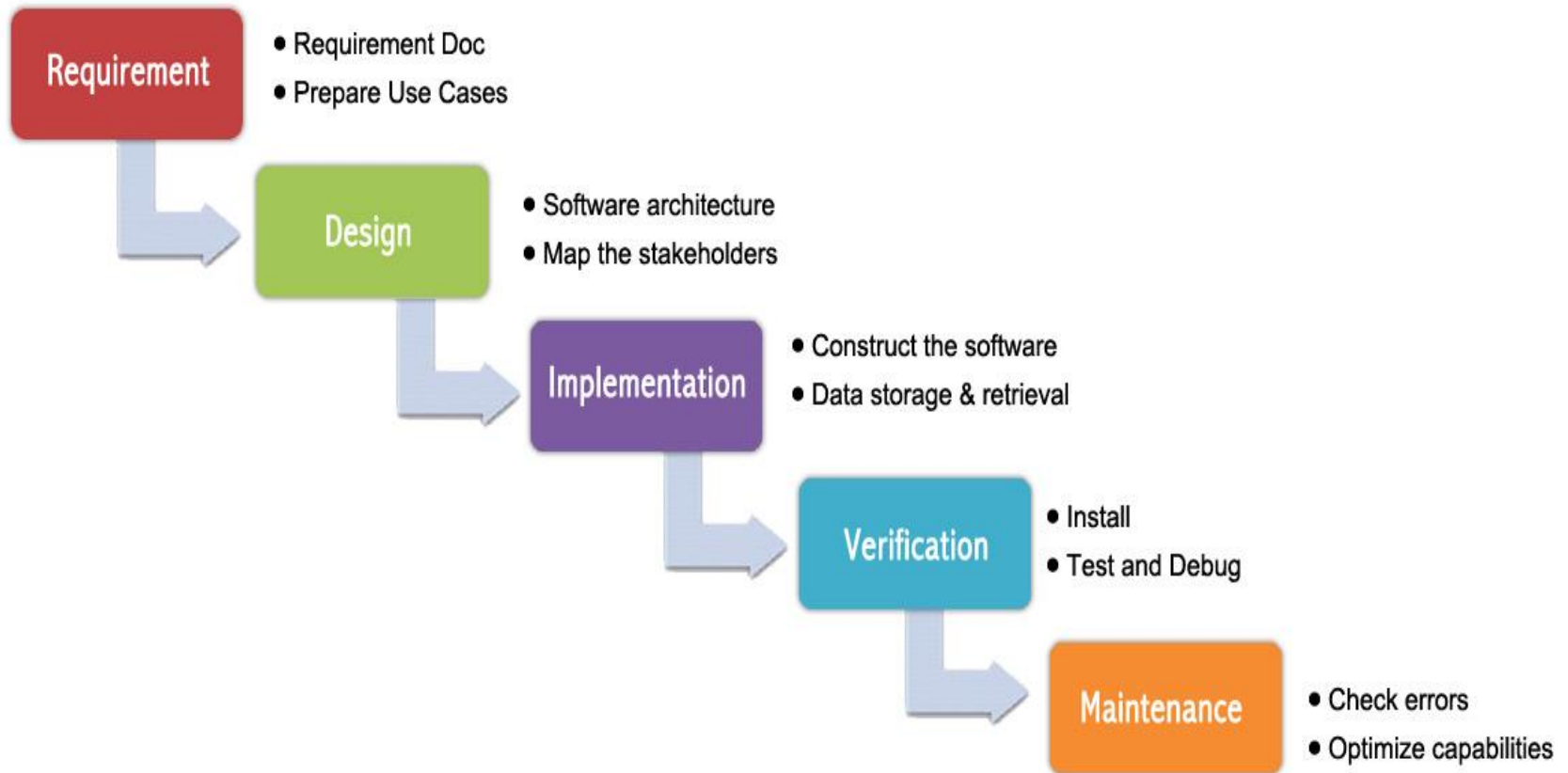
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# Common PM Methodologies

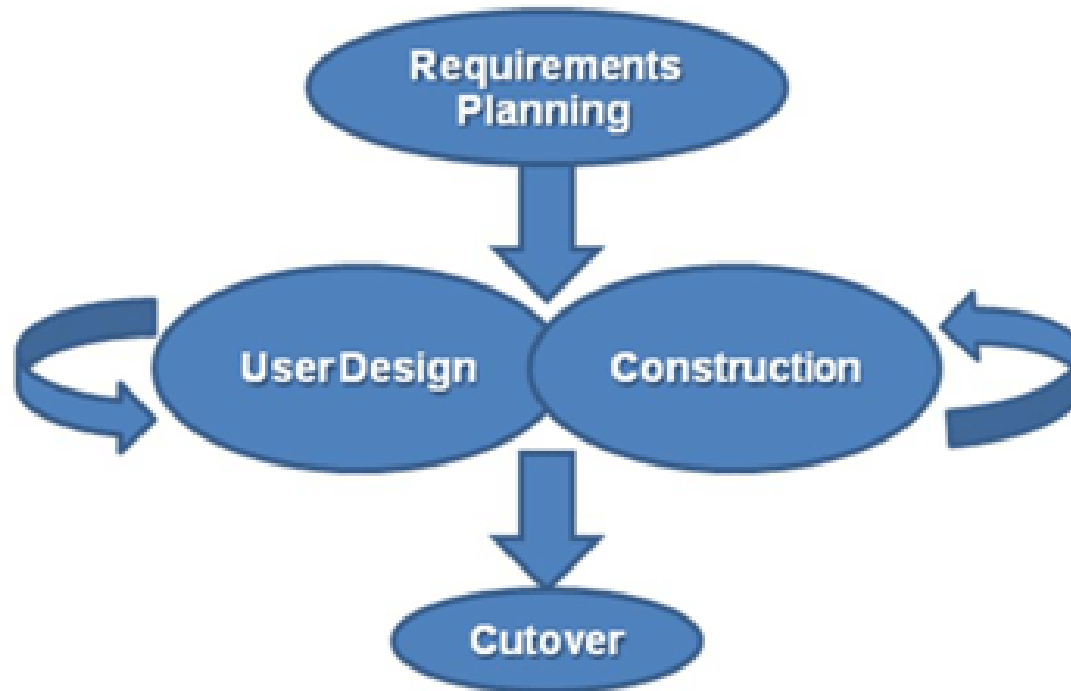
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1. Waterfall
2. Rapid Application Development (RAD)
3. Lean Six Sigma
4. Agile

# Waterfall Methodology



# RAD Methodology



# Lean Six Sigma Methodology

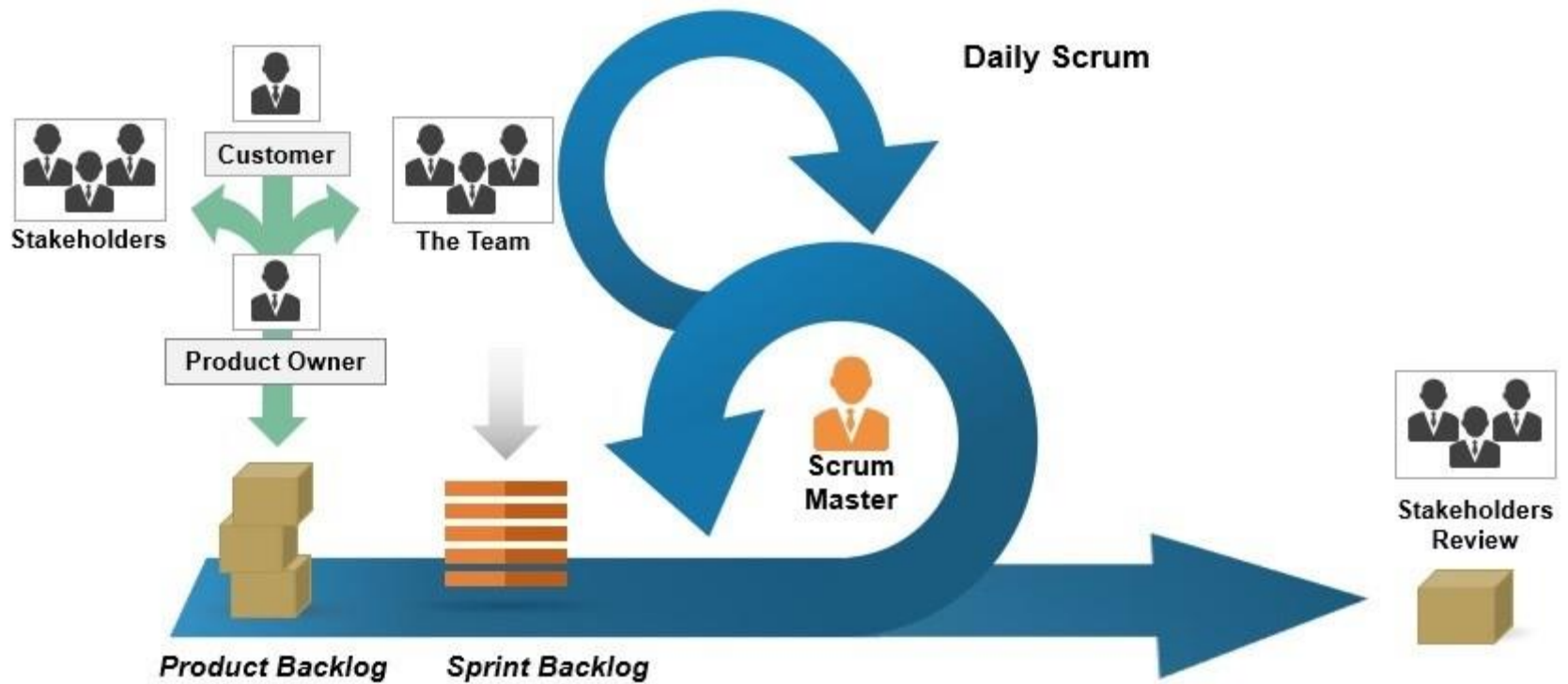
DMAIC



# Common Agile Methodology Types

1. Xtreme Programing (XP)
2. Kanban
3. Scrum
4. Crystal
5. SAFe (Scaled Agile Framework)

# Agile Scrum





# Project Management Certifications

## Six Sigma

- White Belt
- Yellow Belt
- Green Belt
- Black Belt
- Master Black Belt

## Agile Scrum (Scrum Master)

- CSM (ScrumAlliance.org)
- PSM (Scrum.org)
- others

## PMI

- CAPM
- PMP
- PMI-ACP
- PgMP
- PfMP
- PMI-PBA
- PMI-RMP
- PMI-SP

# PMP OVERVIEW

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# PMP

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The PMP is the gold standard of project management certification. Recognized and demanded by organizations worldwide, the PMP validates your competence to perform in the role of a project manager, leading and directing projects and teams.

<https://youtu.be/rTgOXq79AGY>

Sources <http://www.pmi.org/>;

# History

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- In the 60's Project Management had emerged in the aerospace, construction and defense industries.
- Project Management Institute or PMI (The issuer of PMP) was formed in October 1969 at Georgia Institute of Technology
- PMI's objectives defined as the following in 1975:
  - Foster recognition of the need for professionalism in project management; provide a forum for the free exchange of project management problems, solutions and applications; coordinate industrial and academic research efforts; develop common terminology and techniques to improve communications; provide interface between users and suppliers of hardware and software systems; and to provide guidelines for instruction and career development in the field of project management
- First PMP certified in 1984
- Companies like AT&T, IBM and others started requiring their project managers to acquire PMP that fueled its growth.
- First PMBOK (Project Management Book Of Knowledge) presented in 1986
- Today more than 876,000 PMPs, 286 chartered chapters across nearly all countries worldwide

Sources <http://www.wikipedia.org/>;  
Dr. Ginger Levin PMP, PgMP, OPM3

# Benefits

- **Are flexible.** PMI certifications are not based on one specific methodology, so they're flexible and adaptable. You can easily transfer them between industries, market segments and geographic locations.
- **Keep you up-to-date.** PMI continually conducts in-depth studies to ensure that our credentials actually reflect the current skills, knowledge and best practices you need to succeed.
- **Encourage professional growth.** You never have to worry about a PMI certification becoming obsolete. Our certification maintenance program requires you to earn professional development units (PDUs), which encourages you to continually develop your skills and stay current as the profession changes.
- **Help you get ahead.** PMI certification offers financial benefits — The PMI Project Management Salary Survey — Tenth Edition shows that certification positively impacts project manager salaries — and helps you stand out and better market yourself to prospective employers.
- **Are renowned throughout the world.** Part of that marketability comes from the prestige of PMI certifications. PMI has provided project management certifications for over 25 years, and our PMP® credential was the first one designed specifically for project managers. Also, the quality of our [certification governance](#) is an advantage to those or earn or seek one of our certifications.

Source [www.pmi.org](http://www.pmi.org)

# Annualized Salary by Country

| COUNTRY              | N=    | MEDIAN SALARY EXCHANGE RATE |
|----------------------|-------|-----------------------------|
| Switzerland          | 539   | \$132,086                   |
| United States        | 8,967 | \$116,000                   |
| Australia            | 818   | \$101,381                   |
| Germany              | 988   | \$96,987                    |
| Netherlands          | 347   | \$93,839                    |
| Belgium              | 243   | \$92,352                    |
| Ireland              | 520   | \$85,829                    |
| United Kingdom       | 739   | \$83,410                    |
| Qatar                | 283   | \$81,668                    |
| United Arab Emirates | 602   | \$81,665                    |
| New Zealand          | 461   | \$81,196                    |
| Hong Kong            | 322   | \$76,607                    |
| Canada               | 2,869 | \$73,355                    |
| Sweden               | 463   | \$72,759                    |
| Singapore            | 783   | \$71,279                    |
| France               | 792   | \$68,663                    |
| Japan                | 602   | \$66,188                    |
| Saudi Arabia         | 542   | \$63,944                    |
| South Korea          | 290   | \$62,835                    |
| South Africa         | 771   | \$62,455                    |
| Italy                | 1,131 | \$57,219                    |
| Chile                | 194   | \$54,682                    |
| Spain                | 1,308 | \$52,642                    |
| Poland               | 470   | \$47,841                    |
| Portugal             | 340   | \$45,775                    |
| Brazil               | 820   | \$38,643                    |
| Costa Rica           | 98    | \$37,409                    |
| Malaysia             | 440   | \$36,247                    |
| Mexico               | 680   | \$35,863                    |
| Ecuador              | 153   | \$35,000                    |
| Russian Federation   | 240   | \$34,541                    |
| Peru                 | 320   | \$33,774                    |
| Philippines          | 306   | \$32,135                    |
| Colombia             | 453   | \$30,800                    |
| Taiwan               | 298   | \$30,585                    |
| China                | 826   | \$29,075                    |
| Indonesia            | 102   | \$28,980                    |
| India                | 885   | \$28,750                    |
| Turkey               | 344   | \$28,698                    |
| Nigeria              | 297   | \$20,246                    |
| Pakistan             | 171   | \$14,914                    |
| Egypt                | 231   | \$13,933                    |

Source: Earning Power: *Project Management Salary Survey: 11<sup>th</sup> Edition* (32,000+ participants from 42 countries surveyed)

# Annualized Salary by Years of Experience

| COUNTRY              | <3 YEARS  | 3-<5 YEARS | 5-<10 YEARS | 10-<15 YEARS | 15-<20 YEARS | 20+ YEARS |
|----------------------|-----------|------------|-------------|--------------|--------------|-----------|
| Australia            | \$68,763  | \$71,231   | \$91,684    | \$101,205    | \$117,778    | \$126,946 |
| Belgium              | \$53,786  | \$62,159   | \$81,579    | \$93,613     | \$101,850    | \$117,165 |
| Brazil               | \$25,762  | \$27,454   | \$33,653    | \$41,219     | \$47,428     | \$51,524  |
| Canada               | \$55,016  | \$58,684   | \$67,487    | \$77,023     | \$84,358     | \$90,000  |
| Chile                | -         | \$53,243   | \$46,624    | \$58,999     | \$69,072     | \$74,828  |
| China                | \$23,260  | \$26,168   | \$29,075    | \$32,564     | \$34,890     | \$50,882  |
| Colombia             | \$14,784  | \$18,480   | \$24,563    | \$36,960     | \$51,744     | \$55,440  |
| Costa Rica           | \$28,327  | \$32,560   | \$37,037    | \$48,840     | -            | -         |
| Ecuador              | -         | \$20,676   | \$32,700    | \$36,500     | \$42,300     | -         |
| Egypt                | -         | \$10,311   | \$13,376    | \$19,440     | \$21,736     | \$29,817  |
| France               | \$46,920  | \$56,647   | \$64,658    | \$72,096     | \$75,300     | \$88,118  |
| Germany              | \$69,464  | \$74,385   | \$89,834    | \$98,417     | \$109,299    | \$114,438 |
| Hong Kong            | \$51,855  | \$57,456   | \$69,968    | \$96,490     | \$99,590     | \$98,568  |
| India                | \$21,563  | \$22,389   | \$25,875    | \$32,894     | \$35,938     | \$51,750  |
| Indonesia            | -         | -          | \$28,152    | \$33,120     | -            | -         |
| Ireland              | \$56,647  | \$71,753   | \$80,107    | \$91,551     | \$96,128     | \$113,294 |
| Italy                | \$45,775  | \$48,064   | \$51,497    | \$57,219     | \$62,941     | \$69,807  |
| Japan                | \$54,534  | \$54,534   | \$61,805    | \$68,168     | \$72,712     | \$72,712  |
| Malaysia             | \$29,118  | \$28,507   | \$28,997    | \$41,080     | \$50,431     | \$47,967  |
| Mexico               | \$25,028  | \$26,452   | \$31,437    | \$38,152     | \$45,782     | \$52,192  |
| Netherlands          | \$63,227  | \$77,646   | \$86,401    | \$101,166    | \$108,716    | \$102,995 |
| New Zealand          | \$54,354  | \$63,749   | \$75,156    | \$87,235     | \$87,235     | \$99,985  |
| Nigeria              | \$16,432  | \$14,774   | \$19,152    | \$31,301     | \$33,182     | -         |
| Pakistan             | -         | \$9,246    | \$14,020    | \$17,883     | \$28,612     | -         |
| Peru                 | \$26,253  | \$23,716   | \$29,497    | \$41,296     | \$45,485     | \$40,468  |
| Philippines          | \$17,874  | \$20,262   | \$24,720    | \$38,439     | \$55,144     | \$45,636  |
| Poland               | \$21,953  | \$31,931   | \$44,837    | \$50,292     | \$53,219     | \$55,880  |
| Portugal             | \$30,212  | \$33,817   | \$42,342    | \$45,775     | \$57,219     | \$57,219  |
| Qatar                | \$61,904  | \$76,767   | \$65,334    | \$88,201     | \$100,043    | \$122,501 |
| Russian Federation   | -         | \$29,120   | \$34,512    | \$41,702     | \$36,238     | -         |
| Saudi Arabia         | \$38,366  | \$53,286   | \$57,549    | \$76,999     | \$95,916     | \$88,242  |
| Singapore            | \$50,233  | \$54,559   | \$65,999    | \$77,366     | \$91,666     | \$100,466 |
| South Africa         | \$36,603  | \$43,024   | \$55,515    | \$62,802     | \$80,199     | \$76,333  |
| South Korea          | \$46,465  | \$58,305   | \$58,305    | \$65,930     | \$74,593     | \$82,973  |
| Spain                | \$40,053  | \$43,487   | \$49,781    | \$57,219     | \$61,797     | \$67,519  |
| Sweden               | \$56,148  | \$60,446   | \$63,804    | \$72,474     | \$78,356     | \$82,833  |
| Switzerland          | \$103,027 | \$112,019  | \$124,974   | \$142,247    | \$142,247    | \$148,851 |
| Taiwan               | \$28,592  | \$23,527   | \$29,702    | \$31,042     | \$35,944     | \$49,014  |
| Turkey               | \$24,746  | \$22,668   | \$27,957    | \$34,002     | \$39,669     | \$34,002  |
| United Arab Emirates | \$48,999  | \$65,332   | \$70,776    | \$94,972     | \$114,330    | \$133,658 |
| United Kingdom       | \$57,305  | \$64,945   | \$77,145    | \$82,773     | \$92,961     | \$101,875 |
| United States        | \$83,000  | \$90,000   | \$103,407   | \$120,000    | \$126,690    | \$135,000 |

Source: *Project Management Salary Survey: 11<sup>th</sup> Edition*

# PMP vs Non-PMP

| COUNTRY              | PMP*      | <5        | 5-<10     | 10+       | NON-PMP*  | % INCREASE PMP* VS. NON-PMP* |
|----------------------|-----------|-----------|-----------|-----------|-----------|------------------------------|
| Philippines          | \$37,079  | \$27,191  | \$42,047  | \$58,870  | \$20,131  | 84%                          |
| Indonesia            | \$33,120  | \$28,980  | \$32,706  | \$45,885  | \$18,216  | 82%                          |
| Colombia             | \$33,264  | \$25,718  | \$37,699  | \$51,246  | \$23,408  | 42%                          |
| South Africa         | \$65,924  | \$59,058  | \$66,618  | \$86,743  | \$46,513  | 42%                          |
| Malaysia             | \$39,381  | \$33,529  | \$43,496  | \$44,463  | \$28,997  | 36%                          |
| Belgium              | \$96,128  | \$89,671  | \$114,438 | \$102,995 | \$71,410  | 35%                          |
| Ecuador              | \$36,000  | \$32,000  | \$39,300  | \$43,950  | \$27,000  | 33%                          |
| Poland               | \$47,897  | \$44,704  | \$53,219  | \$55,348  | \$36,056  | 33%                          |
| Mexico               | \$36,626  | \$31,793  | \$40,288  | \$48,669  | \$27,673  | 32%                          |
| Brazil               | \$39,917  | \$34,521  | \$42,507  | \$46,371  | \$30,914  | 29%                          |
| Costa Rica           | \$42,000  | \$38,095  | \$46,792  | -         | \$33,211  | 26%                          |
| United States        | \$120,000 | \$106,000 | \$126,000 | \$134,342 | \$95,000  | 26%                          |
| Egypt                | \$13,933  | \$11,704  | \$16,163  | \$19,507  | \$11,147  | 25%                          |
| Canada               | \$77,023  | \$68,954  | \$78,490  | \$91,694  | \$62,352  | 24%                          |
| China                | \$29,075  | \$26,168  | \$34,890  | \$45,067  | \$23,994  | 21%                          |
| Qatar                | \$81,668  | \$65,334  | \$100,995 | \$130,668 | \$68,601  | 19%                          |
| Taiwan               | \$30,879  | \$27,905  | \$32,349  | \$43,132  | \$26,141  | 18%                          |
| Germany              | \$97,273  | \$91,551  | \$102,995 | \$108,716 | \$82,396  | 18%                          |
| Russian Federation   | \$36,131  | \$34,800  | \$41,414  | \$41,932  | \$30,629  | 18%                          |
| France               | \$71,645  | \$67,519  | \$76,960  | \$85,829  | \$60,778  | 18%                          |
| Singapore            | \$73,333  | \$63,447  | \$79,199  | \$95,767  | \$62,333  | 18%                          |
| Portugal             | \$46,348  | \$40,797  | \$51,497  | \$53,786  | \$39,481  | 17%                          |
| Hong Kong            | \$76,607  | \$64,350  | \$89,375  | \$98,824  | \$65,755  | 17%                          |
| New Zealand          | \$85,893  | \$77,840  | \$90,590  | \$94,616  | \$73,814  | 16%                          |
| Italy                | \$57,219  | \$55,638  | \$59,508  | \$62,941  | \$49,209  | 16%                          |
| Pakistan             | \$14,968  | \$12,747  | \$17,167  | \$31,545  | \$12,875  | 16%                          |
| Saudi Arabia         | \$63,944  | \$57,549  | \$79,930  | \$111,901 | \$55,871  | 14%                          |
| Spain                | \$54,930  | \$51,497  | \$57,219  | \$68,663  | \$48,000  | 14%                          |
| United Arab Emirates | \$84,000  | \$71,865  | \$95,820  | \$128,622 | \$73,498  | 14%                          |
| Chile                | \$57,580  | \$51,804  | \$64,395  | \$77,706  | \$50,941  | 13%                          |
| India                | \$28,750  | \$24,438  | \$34,500  | \$37,375  | \$25,444  | 13%                          |
| United Kingdom       | \$86,594  | \$81,202  | \$82,773  | \$109,515 | \$77,053  | 12%                          |
| Sweden               | \$73,878  | \$69,793  | \$76,565  | \$80,035  | \$66,155  | 12%                          |
| South Korea          | \$64,584  | \$56,857  | \$63,687  | \$80,730  | \$58,305  | 11%                          |
| Ireland              | \$89,262  | \$80,107  | \$91,551  | \$104,139 | \$80,679  | 11%                          |
| Nigeria              | \$21,451  | \$17,019  | \$24,898  | \$41,040  | \$19,426  | 10%                          |
| Switzerland          | \$133,102 | \$127,006 | \$142,247 | \$151,391 | \$121,926 | 9%                           |
| Netherlands          | \$96,296  | \$89,434  | \$102,995 | \$94,007  | \$89,262  | 8%                           |
| Peru                 | \$33,922  | \$29,025  | \$39,290  | \$41,001  | \$32,447  | 5%                           |
| Australia            | \$102,262 | \$92,591  | \$98,736  | \$119,541 | \$98,736  | 4%                           |
| Japan                | \$66,188  | \$63,623  | \$67,531  | \$72,712  | \$65,895  | 0%                           |
| Turkey               | \$28,472  | \$27,391  | \$34,191  | \$34,002  | \$29,876  | -5%                          |

Source: Project Management Salary Survey: 11<sup>th</sup> Edition



# Annualized PM Salary by Role

| COUNTRY              | DIRECTOR OF PM/PNO | PORTFOLIO MANAGER | PROGRAM MANAGER | PROJECT MANAGER III | PROJECT MANAGER II | PROJECT MANAGER I | PROJECT MANAGEMENT SPECIALIST | PROJECT MANAGEMENT CONSULTANT |
|----------------------|--------------------|-------------------|-----------------|---------------------|--------------------|-------------------|-------------------------------|-------------------------------|
| Australia            | \$126,946          | \$121,202         | \$112,841       | \$105,789           | \$90,273           | \$77,214          | \$89,611                      | \$95,210                      |
| Belgium              | \$115,487          | \$96,128          | \$113,138       | \$91,551            | \$77,321           | \$64,736          | -                             | \$74,385                      |
| Brazil               | \$61,829           | \$43,795          | \$46,371        | \$41,219            | \$33,233           | \$28,853          | \$30,914                      | \$34,006                      |
| Canada               | \$92,427           | \$88,026          | \$80,691        | \$74,089            | \$68,954           | \$58,684          | \$63,819                      | \$79,590                      |
| Chile                | \$64,280           | \$77,706          | \$65,735        | \$54,682            | \$43,314           | \$51,254          | \$48,207                      | \$51,804                      |
| China                | \$34,890           | \$43,613          | \$29,075        | \$34,890            | \$24,423           | \$23,260          | \$23,260                      | \$29,075                      |
| Colombia             | \$37,114           | \$63,140          | \$36,282        | \$35,420            | \$29,568           | \$22,176          | \$27,720                      | \$22,176                      |
| Costa Rica           | -                  | -                 | -               | \$39,072            | \$38,584           | \$31,258          | -                             | -                             |
| Ecuador              | \$36,000           | -                 | \$36,000        | \$39,300            | \$36,000           | \$24,500          | \$25,000                      | \$32,174                      |
| Egypt                | \$19,507           | \$18,949          | \$20,621        | \$14,045            | \$13,655           | \$9,140           | \$10,311                      | \$13,933                      |
| France               | \$82,968           | \$80,107          | \$77,818        | \$74,385            | \$62,941           | \$59,508          | \$62,369                      | \$72,599                      |
| Germany              | \$108,716          | \$106,084         | \$108,716       | \$98,417            | \$91,551           | \$82,396          | \$86,914                      | \$89,720                      |
| Hong Kong            | \$127,679          | \$109,896         | \$95,759        | \$89,375            | \$76,607           | \$57,073          | \$63,201                      | \$68,947                      |
| India                | \$46,000           | \$37,375          | \$33,063        | \$28,750            | \$25,875           | \$20,772          | \$17,250                      | \$21,563                      |
| Indonesia            | -                  | -                 | \$39,252        | \$27,117            | \$26,220           | \$23,598          | \$32,016                      | \$40,710                      |
| Ireland              | \$116,727          | \$93,839          | \$91,551        | \$89,262            | \$80,107           | \$68,663          | \$68,663                      | \$90,979                      |
| Italy                | \$68,663           | \$75,195          | \$65,230        | \$58,662            | \$51,593           | \$49,209          | \$49,209                      | \$51,497                      |
| Japan                | \$77,257           | \$72,712          | \$81,801        | \$72,712            | \$63,623           | \$59,987          | \$55,443                      | \$77,711                      |
| Malaysia             | \$57,995           | \$48,329          | \$43,496        | \$42,046            | \$34,797           | \$24,769          | \$30,206                      | \$28,997                      |
| Mexico               | \$48,834           | \$48,580          | \$42,730        | \$36,137            | \$30,521           | \$26,045          | \$25,851                      | \$33,192                      |
| Netherlands          | \$114,438          | \$96,987          | \$102,995       | \$92,191            | \$85,829           | \$68,663          | \$88,232                      | \$89,605                      |
| New Zealand          | \$98,978           | \$100,656         | \$98,665        | \$83,880            | \$71,466           | \$60,192          | \$70,459                      | \$91,597                      |
| Nigeria              | \$17,976           | \$32,832          | \$36,400        | \$23,585            | \$19,699           | \$16,416          | \$15,322                      | \$15,048                      |
| Pakistan             | \$20,815           | \$17,167          | \$21,030        | \$15,737            | \$14,306           | \$10,372          | \$12,518                      | -                             |
| Peru                 | \$45,485           | \$41,296          | \$41,886        | \$38,789            | \$28,907           | \$26,842          | \$33,037                      | \$26,220                      |
| Philippines          | \$46,178           | \$56,132          | \$36,597        | \$36,167            | \$24,524           | \$17,247          | \$13,311                      | -                             |
| Poland               | \$66,524           | \$58,541          | \$55,082        | \$46,833            | \$39,914           | \$35,125          | \$30,335                      | \$47,897                      |
| Portugal             | \$46,748           | \$59,279          | \$51,497        | \$45,775            | \$40,053           | \$38,680          | \$40,626                      | \$40,053                      |
| Qatar                | -                  | -                 | \$94,734        | \$98,001            | \$84,934           | \$65,334          | \$67,893                      | \$94,734                      |
| Russian Federation   | \$43,140           | \$39,520          | \$33,074        | \$35,950            | \$34,066           | \$29,335          | -                             | -                             |
| Saudi Arabia         | \$95,916           | \$102,310         | \$76,732        | \$67,940            | \$56,590           | \$51,714          | \$47,958                      | \$74,601                      |
| Singapore            | \$108,899          | \$114,399         | \$87,999        | \$76,727            | \$67,268           | \$52,799          | \$45,613                      | \$67,466                      |
| South Africa         | \$83,273           | \$76,333          | \$69,394        | \$62,455            | \$50,796           | \$40,897          | \$58,985                      | \$64,786                      |
| South Korea          | \$91,135           | -                 | \$62,790        | \$69,983            | \$68,244           | \$60,548          | \$68,274                      | \$56,960                      |
| Spain                | \$68,663           | \$62,941          | \$59,508        | \$57,219            | \$50,353           | \$45,775          | \$48,064                      | \$45,775                      |
| Sweden               | \$88,990           | \$81,042          | \$80,819        | \$75,166            | \$67,162           | \$65,147          | \$60,110                      | \$67,162                      |
| Switzerland          | \$150,375          | \$152,407         | \$142,247       | \$137,166           | \$121,926          | \$113,797         | \$119,894                     | \$130,054                     |
| Taiwan               | \$38,231           | \$41,172          | \$32,676        | \$33,330            | \$27,905           | \$28,428          | \$26,141                      | \$35,453                      |
| Turkey               | \$45,336           | \$35,513          | \$32,113        | \$28,335            | \$28,335           | \$22,668          | \$25,596                      | \$28,335                      |
| United Arab Emirates | \$130,663          | \$130,663         | \$99,543        | \$97,997            | \$72,001           | \$60,910          | \$65,332                      | \$81,665                      |
| United Kingdom       | \$109,133          | \$109,515         | \$95,508        | \$80,000            | \$73,222           | \$61,125          | \$71,312                      | \$89,140                      |
| United States        | \$144,000          | \$138,000         | \$125,000       | \$115,000           | \$100,000          | \$87,360          | \$92,221                      | \$120,000                     |

Source: Project Management Salary Survey: 11<sup>th</sup> Edition

# PMP Jobs

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- Jobs requiring or recommending PMP
  - <https://www.indeed.com/jobs?q=PMP&l=Dallas%2C+TX>
  - <https://www.glassdoor.com/Job/jobs.htm?suggestCount=0&suggestChosen=false&clickSource=searchBtn&typedKeyword=PMP&sc.keyword=PMP&locT=C&locId=1139977&jobType=>
  - [https://www.linkedin.com/jobs/search?keywords=PMP&location=Dallas,%20Texas,%20United%20States&trk=homepage-basic\\_jobs-search-bar\\_search-submit&redirect=false&position=1&pageNum=0](https://www.linkedin.com/jobs/search?keywords=PMP&location=Dallas,%20Texas,%20United%20States&trk=homepage-basic_jobs-search-bar_search-submit&redirect=false&position=1&pageNum=0)

# Where to Start

- PMI website:
  - [www.pmi.org](http://www.pmi.org)
- PMP Related
  - <https://www.pmi.org/certifications/types/project-management-pmp>
- PMP Handbook
  - <https://www.pmi.org/-/media/pmi/documents/public/pdf/certifications/project-management-professional-handbook.pdf>
- PMP Application Checklist
  - [PMP App Checklist v2 \(pmi.org\)](#)
- Project Management Salary Survey
  - <https://www.pmi.org/-/media/pmi/documents/public/pdf/learning/pmi-salary-survey-11th-edition-report.pdf?v=b8dbbec0-0048-4b6d-99ca-389b36cad726>
- Examination Content Outline
  - Current (through Dec 31<sup>st</sup>, 2020)  
<https://www.pmi.org/-/media/pmi/documents/public/pdf/certifications/project-management-professional-exam-outline.pdf>
  - New (after Jan 2<sup>nd</sup>, 2021)  
<https://www.pmi.org/-/media/pmi/documents/public/pdf/certifications/pmp-examination-content-outline-july-2020.pdf?v=d2061dbc-3a3a-4cf0-bb67-7e8e0429f8f8>

# Requirements

| Educational Background  | Project Management Experience  | Project Management Education  |
|---|--|---|
| Secondary degree (high school diploma, associate's degree or global equivalent)                                       | Minimum five years/60 months unique non-overlapping professional project management experience*  | 35 contact hours of formal education unless you are an active CAPM holder |
| <b>OR</b>   |  |   |
| Four-year degree (bachelor's degree or global equivalent)   | Minimum three years/36 months unique non-overlapping professional project management experience* | 35 contact hours of formal education unless you are an active CAPM holder |
| <b>OR</b>   |  |   |
| Bachelor's or post-graduate degree from a GAC accredited program (bachelor's degree or master's or global equivalent) | Minimum two years/24 months unique non-overlapping professional project management experience*   | 35 contact hours of formal education unless you are an active CAPM holder |

# PM Experience

- The experience does not necessarily have to be paid work, but it does need to be in a professional setting.
- Activities such as school projects or planning personal events would not qualify.
- All project experience must be recorded individually regardless of the number of projects you include.



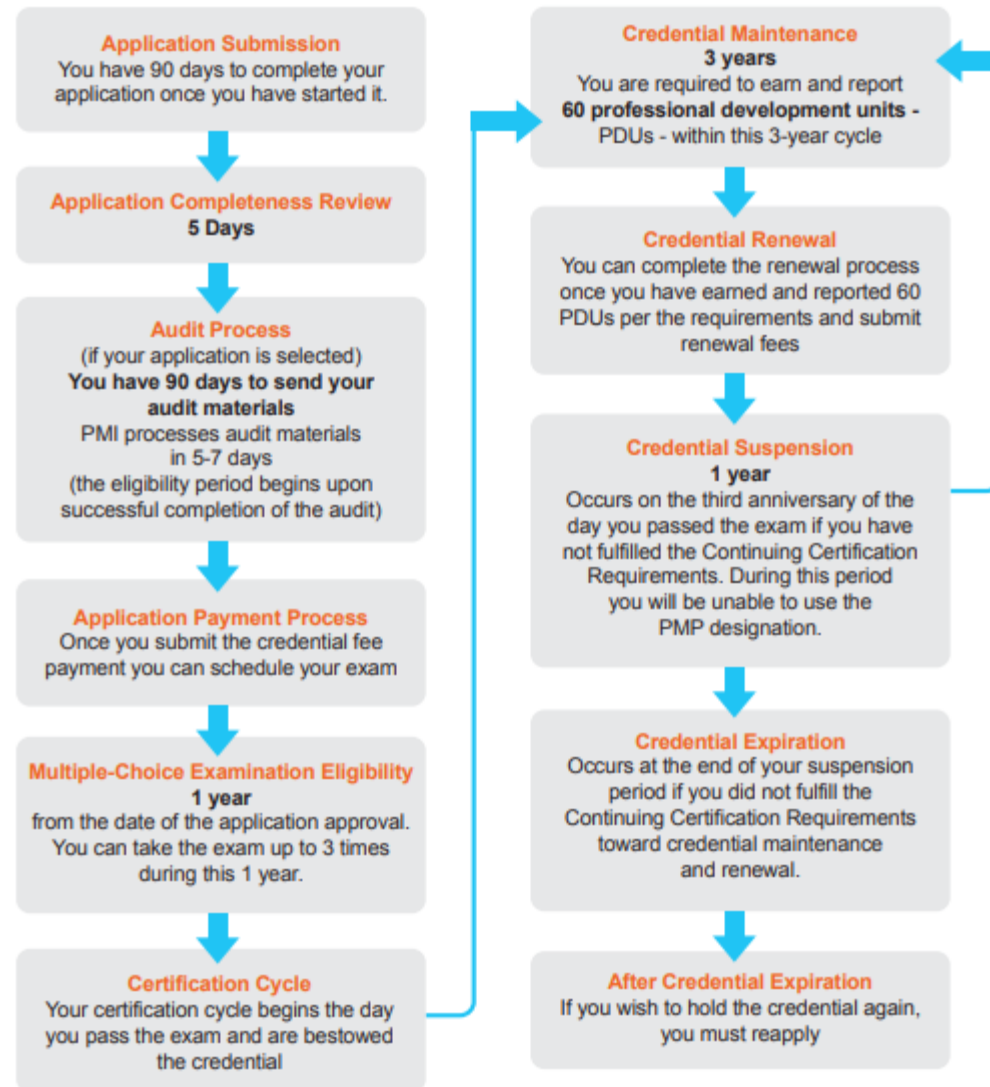
[PMP App Checklist v2 \(pmi.org\)](https://www.pmi.org)

# PM Education

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- No timeframe associated with this requirement
- But has to be completed BEFORE application date
- Do Include:
  - College/ Academic Classes
  - Employer sponsored programs
  - PMI Registered Education Providers
  - 35 Hours earned through this class
- Do NOT include:
  - Self-Directed learning
  - PMI chapter meetings

# Timeline of PMP Credential Process



# PMI Membership

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- Cost:
  - US\$129/year Plus one-time US\$10 application fee
- Benefits
  - Download the PMBOK® Guide for free
  - Unlock 1,000+ tools and templates
  - Get more, free opportunities to earn PDUs
  - Save on career-advancing certifications
  - Find relevant jobs with the PM Job Board
  - Stay up-to-date with PMI publications



# PMP Credential Fees

| Exam Administration Type                           | PMI Member Status | US Dollars | Euros    | BRL      | INR     |
|--|-------------------|------------|----------|----------|---------|
| Center-based testing (CBT)<br>Online testing (OPT) | member            | \$405      | €340     | R\$1,967 | ₹23,459 |
| Center-based testing (CBT)<br>Online testing (OPT) | nonmember         | \$555      | €465     | R\$3,370 | ₹42,863 |
| Reexamination CBT/OPT                              | member            | \$275      | €230     | R\$1,670 | ₹15,929 |
| Reexamination CBT/OPT                              | nonmember         | \$375      | €315     | R\$2,277 | ₹28,961 |
| CCR certification renewal                          | member            | \$60       | USD only | R\$364   | ₹3,475  |
| CCR certification renewal                          | nonmember         | \$150      | USD only | R\$911   | ₹11,585 |

# PMP Exam

## Current Format (Valid through Dec 31<sup>st</sup>, 2020)

- Total # of Questions: 200
  - Scored Questions: 175
  - # of unscored questions: 25
- Total Examination Time: 4 hrs
  - Expect pace of 1 min per question.
  - 40 minutes left over for review
  - Unanswered question = Incorrect answer
- Question Breakdown
  - Initiation 13%
  - Planning 24%
  - Executing 31%
  - Monitoring & Controlling 25%
  - Closing 7%

<https://www.pmi.org/-/media/pmi/documents/public/pdf/certifications/project-management-professional-exam-outline.pdf>

# PMP Exam

## New Format (Valid after Jan 2<sup>nd</sup> , 2021)

- Total # of Questions: 200
  - Scored Questions: 175
  - # of unscored questions: 25
- Total Examination Time: 4 hrs
  - Expect pace of 1 min per question.
  - 40 minutes left over for review
  - Unanswered question = Incorrect answer
- Question Breakdown
  - People 42%
  - Process 50%
  - Business Environment 8%

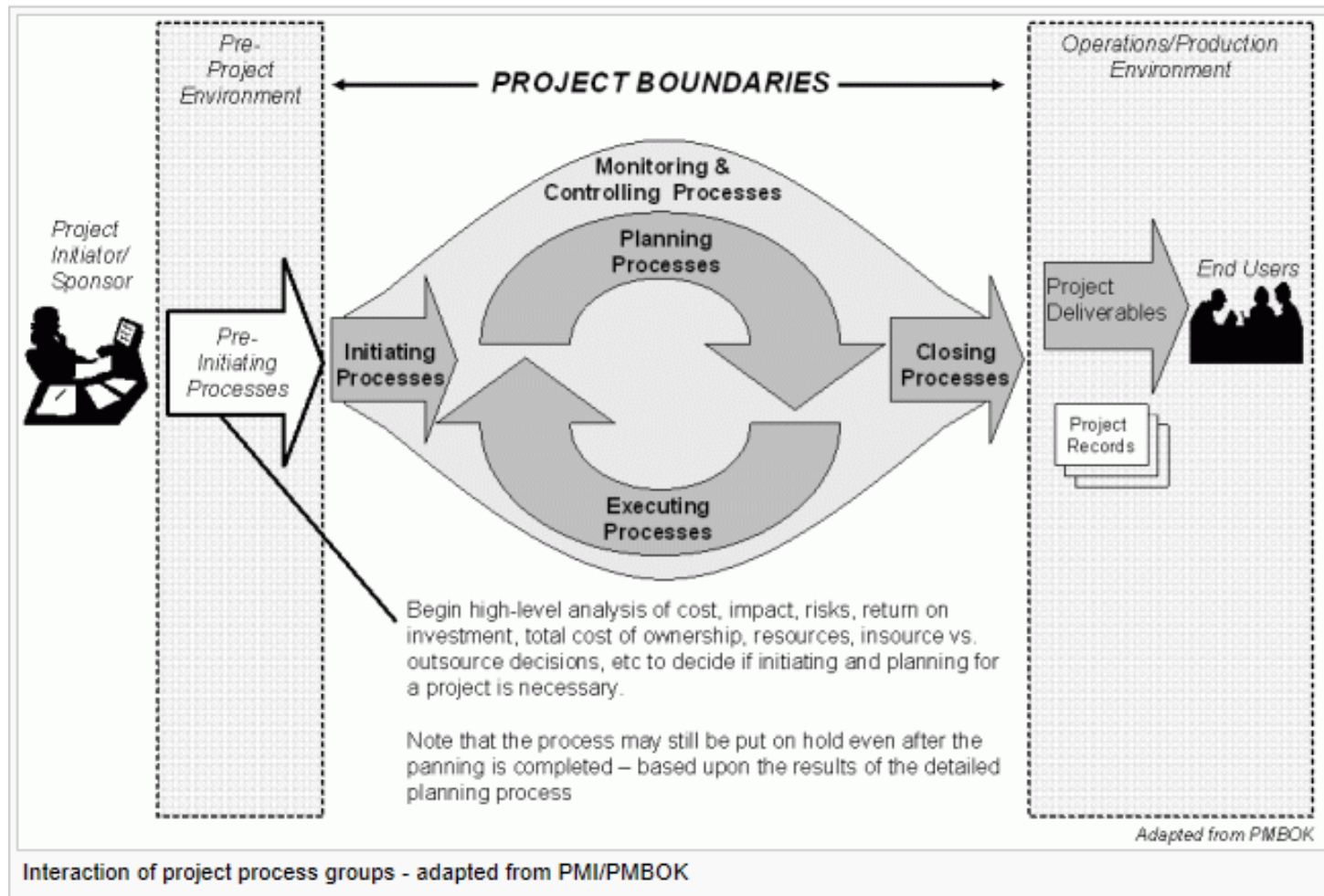
<https://www.pmi.org/-/media/pmi/documents/public/pdf/certifications/pmp-examination-content-outline-june-2019.pdf>

# Project Management Overview

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- Project Mgmt Lifecycle
- Project Mgmt Process Groups
- Project Mgmt Knowledge Areas

# Project Lifecycle



# Project Process Groups

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1. Initiation
2. Planning
3. Execution
4. Monitor & Control
5. Closure

# Knowledge Areas

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1. Integration Management
2. Scope Management
3. Schedule Management
4. Cost Management
5. Quality Management
6. Resource Management
7. Communication Management
8. Risk Management
9. Procurement Management
10. Stakeholder Management

# Knowledge Areas –Process Group

|                 | Initiating  | Planning       | Executing | Monitor/Ctrl | Closing |
|-----------------|-------------|----------------|-----------|--------------|---------|
| Knowledge Areas | Integration |                |           |              |         |
|                 |             | Scope          |           | Scope        |         |
|                 |             | Schedule       |           | Schedule     |         |
|                 |             | Cost           |           | Cost         |         |
|                 |             | Quality        |           |              |         |
|                 |             | Resources      |           |              |         |
|                 |             | Communications |           |              |         |
|                 |             | Risk           |           | Risk         |         |
|                 |             | Procurement    |           |              |         |
|                 |             | Stakeholders   |           |              |         |

Source: Rita Mulcahy's PMP Exam Prep



# Project Constraints

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- Constraint: *A limitation or restriction*
- Common Project Constraints include:
  - Scope
  - Quality
  - Time (or Schedule)
  - Cost (or Budget)
  - Resources
  - Risks
- Can be used to evaluate competing demands
- Change in one constraint can effect another. For e.g. shortening the time (schedule) may result in additional resources, costs, risks, etc.

# Triple Constraint



# INTEGRATION MANAGEMENT

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Knowledge Areas

# Knowledge Areas –Process Group

|                 | Initiating  | Planning       | Executing | Monitor/Ctrl | Closing |
|-----------------|-------------|----------------|-----------|--------------|---------|
| Knowledge Areas | Integration |                |           |              |         |
|                 |             | Scope          |           | Scope        |         |
|                 |             | Schedule       |           | Schedule     |         |
|                 |             | Cost           |           | Cost         |         |
|                 |             | Quality        |           |              |         |
|                 |             | Resources      |           |              |         |
|                 |             | Communications |           |              |         |
|                 |             | Risk           |           | Risk         |         |
|                 |             | Procurement    |           |              |         |
|                 |             | Stakeholders   |           |              |         |

Source: Rita Mulcahy's PMP Exam Prep

# Integration Management

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- Project Selection (Pre-Initiation and Pre-Integration)
- Project Charter
- Project Plan
- Directing and Managing Project
- Integrated Change Control
- Project Closure

# The word Charter

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Following is a dictionary definition of the word Charter

- Charter (noun):
  - A document, issued by a sovereign or state, outlining the conditions under which a corporation, colony, city, or other corporate body is organized, and defining its rights and privileges\*

\*Dictionary.com

# Develop Project Charter

- Charter
  - Scope (high level requirements) of project
  - Assumptions and any constraints (such as Time, Cost goals)
  - Stakeholder definition and level of influence (for e.g. RACI)
  - Project Stakeholder Organizational Information
  - High level schedule
  - Business case (including financial metrics)
  - Financial Metrics
    - ROI: The amount of income from an investment
    - IRR: The discounted rate that zeroes out the Net Present Value (NPV)
    - NPV: Process to calculate the anticipated net monetary gain (or loss) from a project by discounting future cash inflows and outflows to the current point in time.
    - BCR: Ratio between monetary benefits to cash
    - Payback Period: The amount of time when Investment ROI = 0.
  - Signoff from the Sponsor and/or Sr. Management

# SCOPE MANAGEMENT

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Knowledge Areas



# Knowledge Areas –Process Group

|                 | Initiating  | Planning       | Executing | Monitor/Ctrl | Closing |
|-----------------|-------------|----------------|-----------|--------------|---------|
| Knowledge Areas | Integration |                |           |              |         |
|                 |             | Scope          |           | Scope        |         |
|                 |             | Schedule       |           | Schedule     |         |
|                 |             | Cost           |           | Cost         |         |
|                 |             | Quality        |           |              |         |
|                 |             | Resources      |           |              |         |
|                 |             | Communications |           |              |         |
|                 |             | Risk           |           | Risk         |         |
|                 |             | Procurement    |           |              |         |
|                 |             | Stakeholders   |           |              |         |

Source: Rita Mulcahy's PMP Exam Prep

# Scope Management



How the customer explained it



How the project leader understood it



How the engineer designed it



How the programmer wrote it



How the sales executive described it



How the project was documented



What operations installed



How the customer was billed



How the helpdesk supported it



What the customer really needed

# Topics

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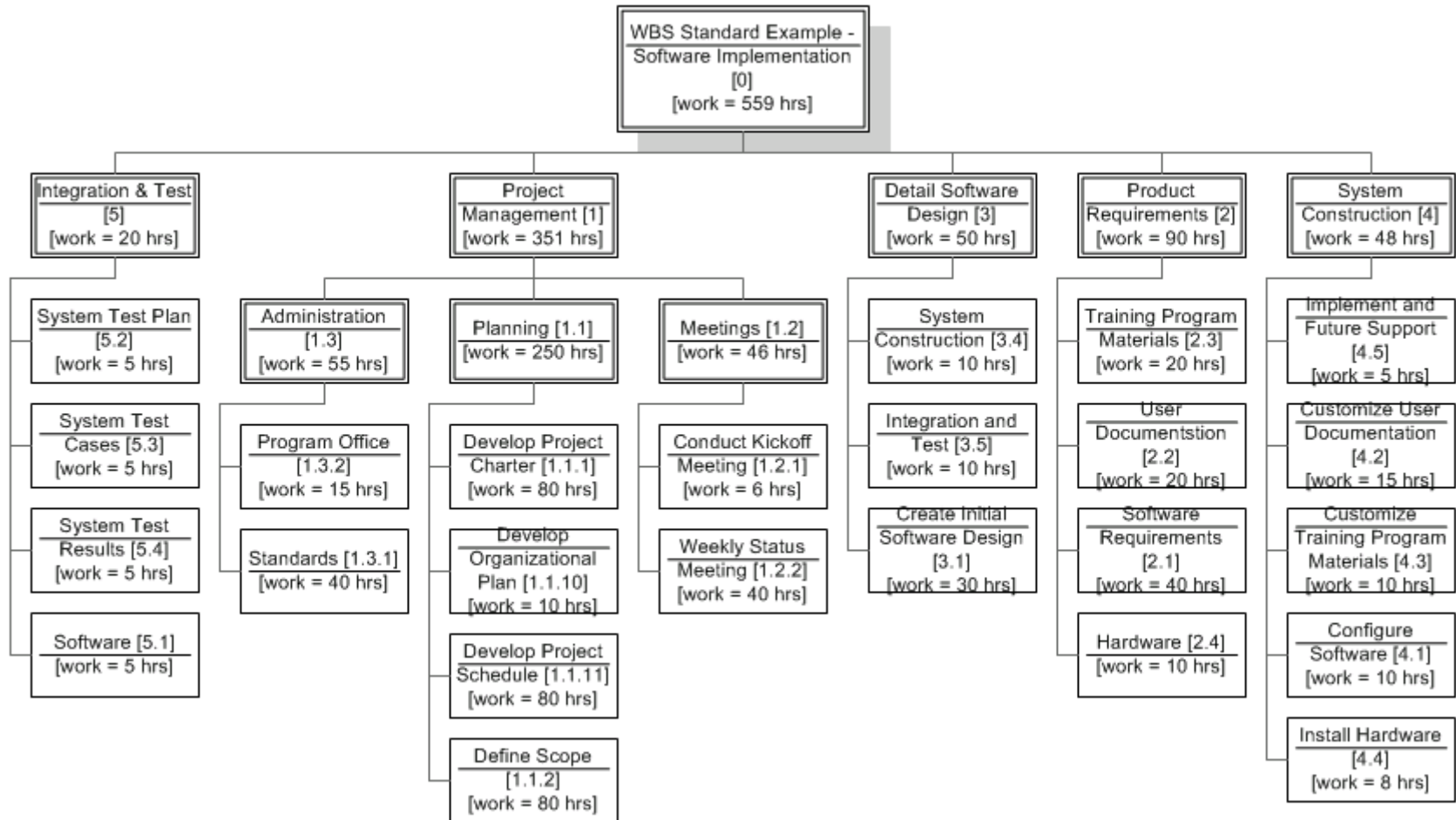
- Scope Definition
- Scope Planning
  - Create WBS
- Scope Verification
- Scope Control

# Collect Requirement Techniques

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- Reviewing Historical Records
- Interviews
- Focus Groups
- Facilitated Workshops
- Brainstorming
- Mind Maps
- Affinity Diagrams
- Questionnaires and Surveys
- Observation
- Prototypes Benchmarking
- Context Diagrams
- Group Decision Making
- Delphi Technique

# Create WBS (Contd.)



# SCHEDULE MANAGEMENT

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Knowledge Areas

# Knowledge Areas –Process Group

|                 | Initiating  | Planning       | Executing | Monitor/Ctrl | Closing |
|-----------------|-------------|----------------|-----------|--------------|---------|
| Knowledge Areas | Integration |                |           |              |         |
|                 |             | Scope          |           | Scope        |         |
|                 |             | Schedule       |           | Schedule     |         |
|                 |             | Cost           |           | Cost         |         |
|                 |             | Quality        |           |              |         |
|                 |             | Resources      |           |              |         |
|                 |             | Communications |           |              |         |
|                 |             | Risk           |           | Risk         |         |
|                 |             | Procurement    |           |              |         |
|                 |             | Stakeholders   |           |              |         |

Source: Rita Mulcahy's PMP Exam Prep

# Topics

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- Activity Definition
- Activity Sequencing
- Activity Resource Estimating
- Activity Duration Estimating
- Schedule Development
- Schedule Control



# COST MANAGEMENT

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Knowledge Areas

# Knowledge Areas –Process Group

|                 | Initiating  | Planning       | Executing | Monitor/Ctrl | Closing |
|-----------------|-------------|----------------|-----------|--------------|---------|
| Knowledge Areas | Integration |                |           |              |         |
|                 |             | Scope          |           | Scope        |         |
|                 |             | Schedule       |           | Schedule     |         |
|                 |             | Cost           |           | Cost         |         |
|                 |             | Quality        |           |              |         |
|                 |             | Resources      |           |              |         |
|                 |             | Communications |           |              |         |
|                 |             | Risk           |           | Risk         |         |
|                 |             | Procurement    |           |              |         |
|                 |             | Stakeholders   |           |              |         |

Source: Rita Mulcahy's PMP Exam Prep

# Topics

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- Types of Cost
- Project Selection Techniques
- Future and Present Values
- Sunk Costs
- Depreciation
- Life Cycle Costing
- Discrete Measurement Techniques
- Cost Estimating
- Cost Range
- Cost Budgeting
- Cost Control
- Earned Value Management

# QUALITY MANAGEMENT

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Knowledge Areas

# Knowledge Areas –Process Group

|                 | Initiating  | Planning       | Executing | Monitor/Ctrl | Closing |
|-----------------|-------------|----------------|-----------|--------------|---------|
| Knowledge Areas | Integration |                |           |              |         |
|                 |             | Scope          |           | Scope        |         |
|                 |             | Schedule       |           | Schedule     |         |
|                 |             | Cost           |           | Cost         |         |
|                 |             | Quality        |           |              |         |
|                 |             | Resources      |           |              |         |
|                 |             | Communications |           |              |         |
|                 |             | Risk           |           | Risk         |         |
|                 |             | Procurement    |           |              |         |
|                 |             | Stakeholders   |           |              |         |

Source: Rita Mulcahy's PMP Exam Prep

# Topics

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- Quality Planning
- Quality Assurance
- Quality Control

# Quality Assurance vs Quality Control

## Quality Assurance

- Verifies or validates that the quality standards defined for the project will indeed meet the desired standards. This validates the quality process and not the product.

## Quality Control

- Measures the product or the output of a process against the specifications. This validates the quality of the product.

The difference is that **QA is *process oriented*** and **QC is *product oriented***.

# RESOURCE MANAGEMENT

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Knowledge Areas



# Knowledge Areas –Process Group

|                 | Initiating  | Planning       | Executing | Monitor/Ctrl | Closing |
|-----------------|-------------|----------------|-----------|--------------|---------|
| Knowledge Areas | Integration |                |           |              |         |
|                 |             | Scope          |           | Scope        |         |
|                 |             | Schedule       |           | Schedule     |         |
|                 |             | Cost           |           | Cost         |         |
|                 |             | Quality        |           |              |         |
|                 |             | Resources      |           |              |         |
|                 |             | Communications |           |              |         |
|                 |             | Risk           |           | Risk         |         |
|                 |             | Procurement    |           |              |         |
|                 |             | Stakeholders   |           |              |         |

Source: Rita Mulcahy's PMP Exam Prep

# Resource Planning

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- Human and other Resource Planning involves:
  - Determining what Roles
  - What Reporting Structure
  - What Relationships the project needs
  - Quantity of resources on the project

# Responsibility Assignment Matrix (RAM)

- This tool lets the project team know who is involved in each area and what they are responsible for in that area. For e.g. following is RAM for communication aka RACI matrix

|              | Team Member |          |          |          |          |
|--------------|-------------|----------|----------|----------|----------|
| Activity     | Person A    | Person B | Person C | Person D | Person E |
| Requirements | R           | A        | I        | C        | I        |
| Code         | I           | R        | A        | C        | C        |
| System Test  | I           | A        | R        | C        | A        |
| UAT          | I           | C        | C        | R        | A        |

R = Responsible, A= Accountable, C= Consult, I = Inform

# COMMUNICATION MANAGEMENT

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Knowledge Areas

# Knowledge Areas –Process Group

|                 | Initiating  | Planning       | Executing | Monitor/Ctrl | Closing |
|-----------------|-------------|----------------|-----------|--------------|---------|
| Knowledge Areas | Integration |                |           |              |         |
|                 |             | Scope          |           | Scope        |         |
|                 |             | Schedule       |           | Schedule     |         |
|                 |             | Cost           |           | Cost         |         |
|                 |             | Quality        |           |              |         |
|                 |             | Resources      |           |              |         |
|                 |             | Communications |           |              |         |
|                 |             | Risk           |           | Risk         |         |
|                 |             | Procurement    |           |              |         |
|                 |             | Stakeholders   |           |              |         |

Source: Rita Mulcahy's PMP Exam Prep

# Topics

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- Communication Planning
- Information Distribution
- Performance Reporting

# RISK MANAGEMENT

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Knowledge Areas

# Knowledge Areas –Process Group

|                 | Initiating  | Planning       | Executing | Monitor/Ctrl | Closing |
|-----------------|-------------|----------------|-----------|--------------|---------|
| Knowledge Areas | Integration |                |           |              |         |
|                 |             | Scope          |           | Scope        |         |
|                 |             | Schedule       |           | Schedule     |         |
|                 |             | Cost           |           | Cost         |         |
|                 |             | Quality        |           |              |         |
|                 |             | Resources      |           |              |         |
|                 |             | Communications |           |              |         |
|                 |             | Risk           |           | Risk         |         |
|                 |             | Procurement    |           |              |         |
|                 |             | Stakeholders   |           |              |         |

Source: Rita Mulcahy's PMP Exam Prep



# Topics

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- Risk Management Planning
- Risk Identification
- Qualitative Risk Analysis
- Quantitative Risk Analysis
- Risk Responses Planning
- Risk Monitoring and Control

# PROCUREMENT MANAGEMENT

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Knowledge Areas

# Knowledge Areas –Process Group

|                 | Initiating  | Planning       | Executing | Monitor/Ctrl | Closing |
|-----------------|-------------|----------------|-----------|--------------|---------|
| Knowledge Areas | Integration |                |           |              |         |
|                 |             | Scope          |           | Scope        |         |
|                 |             | Schedule       |           | Schedule     |         |
|                 |             | Cost           |           | Cost         |         |
|                 |             | Quality        |           |              |         |
|                 |             | Resources      |           |              |         |
|                 |             | Communications |           |              |         |
|                 |             | Risk           |           | Risk         |         |
|                 |             | Procurement    |           |              |         |
|                 |             | Stakeholders   |           |              |         |

Source: Rita Mulcahy's PMP Exam Prep

# Topics

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- Plan Purchases and Acquisition
- Plan Contracting
- Request Seller Responses
- Select Sellers
- Contract Administration
- Contract Closure

# STAKEHOLDER MANAGEMENT

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Knowledge Areas

# Knowledge Areas –Process Group

|                 | Initiating  | Planning       | Executing | Monitor/Ctrl | Closing |
|-----------------|-------------|----------------|-----------|--------------|---------|
| Knowledge Areas | Integration |                |           |              |         |
|                 |             | Scope          |           | Scope        |         |
|                 |             | Schedule       |           | Schedule     |         |
|                 |             | Cost           |           | Cost         |         |
|                 |             | Quality        |           |              |         |
|                 |             | Resources      |           |              |         |
|                 |             | Communications |           |              |         |
|                 |             | Risk           |           | Risk         |         |
|                 |             | Procurement    |           |              |         |
|                 |             | Stakeholders   |           |              |         |

Source: Rita Mulcahy's PMP Exam Prep

# Topics

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- Stakeholder Involvement
- Identify Stakeholders
- Plan Stakeholder Management
- Manage Stakeholder Engagement
- Control Stakeholder Engagement