# Project Management Overview and Concepts

# PROJECT MANAGEMENT STATISTICS

◍ The global project management industry accounts for trillions of dollars annually. In 2021, it was estimated that project management investments worldwide amounted to approximately $4.1 trillion.

◍ Only about **36%** of projects globally are completed on time and within budget. The Standish Group's CHAOS Report found that in 2020, just 36% of projects were considered successful, meeting their original objectives within the allotted time and budget.

# PROJECT MANAGEMENT STATISTICS

The adoption of project management software is widespread, with over **77%** of high-performing projects using project management software. According to the Project Management Institute (PMI), in its 2020 Pulse of the Profession report, 77% of high-performing projects utilized project management software, demonstrating the increasing reliance on technology for project management

# ADVANTAGES OF USING PROJECT MANAGEMENT

**Exam Hint !!**

- Better control of financial, physical, and human resources
- Improved customer relations
- Shorter development times
- Lower costs
- Higher quality and increased reliability
- Higher profit margins
- Improved productivity
- Better internal coordination
- Higher worker morale

# WHAT IS A PROJECT? <span style="color:red">Exam Que</span>

A project is "a temporary endeavor undertaken to accomplish a unique product or service"

## Attributes of projects

- unique purpose
- temporary
- require resources, often from various areas
- should have a primary sponsor and/or customer

# SAMPLES OF IT PROJECTS IN SRI LANKA

- Lanka Government Network – LGN 2.0 and Wifi Facility
- P-Connect Fibre Network and Wifi Facility for Post Offices
- Lanka Government Cloud 2.0
- National Data Center
- Internet Backbone
- Employee Provident Fund (EPF) & Employee Trust (ETF) Fund Consolidated centralized ICT Solution.
- National Cyber Security Operations Center
- Centralized Prison's Management System

# MIND MAP OF A SWOT ANALYSIS TO HELP IDENTIFY POTENTIAL PROJECTS

## Exam Hint !!
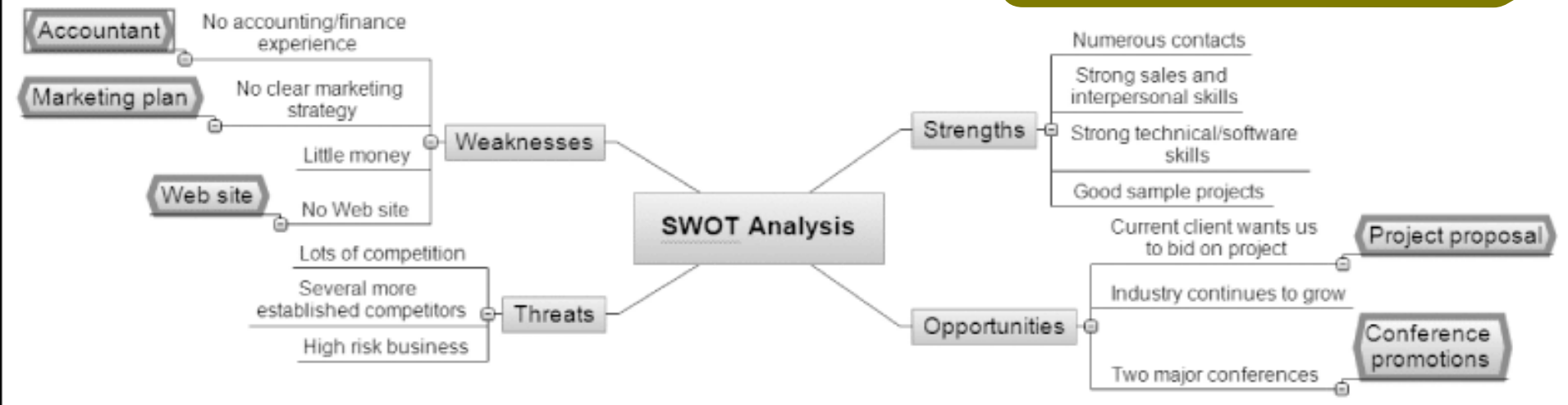
# FOCUSING ON BROAD ORGANIZATIONAL NEEDS

◍ It is often difficult to provide strong justification for many IT projects, but everyone agrees they have a high value.

◍ "It is better to measure gold roughly than to count pennies precisely".

◍ Three important criteria for projects:
I.   There is a *need* for the project
I.   There are *funds* available
II.  There's a strong *will* to make the project succeed

# Exam Que THE TRIPLE CONSTRAINT

◍ Every project is constrained in different ways by its,

Scope goals : What is the project trying to accomplish?

Time goals : How long should it take to complete?

Cost goals : What should it cost?

◍ It is the project manager's duty to balance these three often competing goals

# WHY IT PROJECTS FAIL?

- Weak business case

- Lack of senior management commitment

- Inadequate project planning (budget, schedule, scope, etc.)

- Absence of user involvement

- New or unfamiliar technology

- Lack of defined, clear, or concise requirements

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# WHY IT PROJECTS SUCCEED?

- Sound project management processes

- Project tied to the organization's business goals

- Senior management commitment

- Good change management

- Detailed requirements

# WHY IT PROJECTS SUCCEED?

- Realistic schedule

-  Good stakeholder relationships

- Empowered project manager

- Skilled and appropriate team members with defined roles and responsibilities

- Availability of funding

# WHAT IS PROJECT MANAGEMENT?

"The application of knowledge, skills, tools, and techniques to project activities in order to meet project requirements"

# PROJECT MANAGEMENT FRAMEWORK
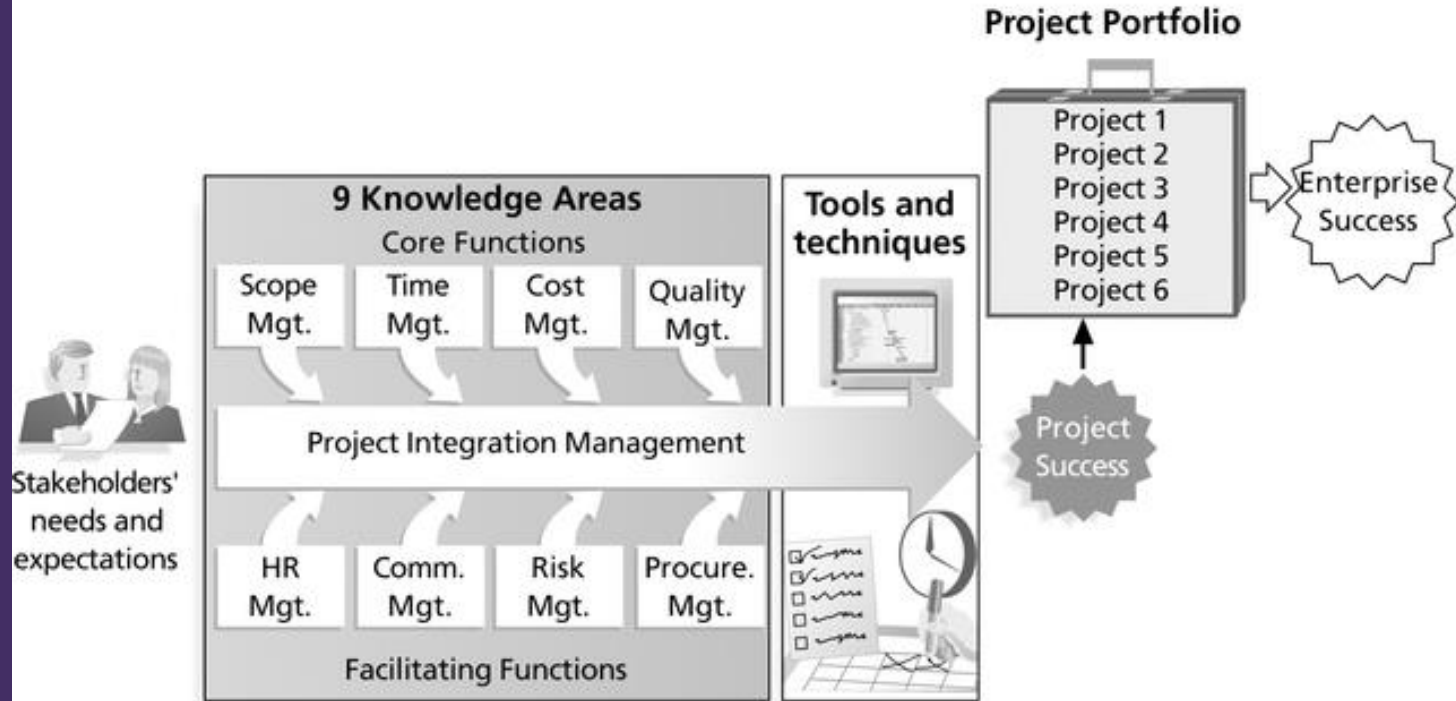


Figure 1-2. Project Management Framework

# 9 PROJECT MANAGEMENT KNOWLEDGE AREAS

▦ Knowledge areas describe the key competencies that project managers must develop

○ 4 core knowledge areas lead to specific project objectives (scope, time, cost, and quality)

○ 4 facilitating knowledge areas are the means through which the project objectives are achieved (human resources, communication, risk, and procurement management)

○ 1 knowledge area (project integration management) affects and is affected by all of the other knowledge areas

# PROJECT MANAGEMENT PROCESS GROUPS

◍ A **process** is a series of actions directed toward a particular result.

◍ Project management can be viewed as a number of interlinked processes.

◍ The project management process groups include:
I. Initiating processes
II. Planning processes
III. Executing processes
IV. Monitoring and controlling processes
V. Closing processes

| KNOWLEDGE AREA | PROJECT MANAGEMENT PROCESS GROUPS | | | | |
|---|---|---|---|---|---|
| | INITIATING | PLANNING | EXECUTING | MONITORING & CONTROLLING | CLOSING |
| *Project Integration Management* | Develop project charter, Develop preliminary project scope statement | Develop project management plan | Direct and manage project execution | Monitor and control project work, Integrated change control | Close project |
| *Project Scope Management* | | Scope planning, Scope definition, Create WBS | | Scope verification, Scope control | |
| *Project Time Management* | | Activity definition, Activity sequencing, Activity resource estimating, Activity duration estimating, Schedule development | | Schedule control | |
| *Project Cost Management* | | Cost estimating, Cost budgeting | | Cost control | |

| KNOWLEDGE AREA | PROJECT MANAGEMENT PROCESS GROUPS | | | | |
|---|---|---|---|---|---|
| | INITIATING | PLANNING | EXECUTING | MONITORING & CONTROLLING | CLOSING |
| *Project Quality Management* | | Quality planning | Perform quality assurance | Perform quality control | |
| *Project Human Resource Management* | | Human resource planning | Acquire project team, Develop project team | Manage project team | |
| *Project Communications Management* | | Communications planning | Information distribution | Performance reporting, Manage stakeholders | |
| *Project Risk Management* | | Risk management planning, Risk identification, Qualitative risk analysis, Quantitative risk analysis, Risk response planning | | Risk monitoring and control | |
| *Project Procurement Management* | | Plan purchases and acquisitions, Plan contracting | Request seller responses, Select sellers | Contract administration | Contract closure |

# PHASES OF THE TRADITIONAL PROJECT LIFE CYCLE

| | Project Feasibility | | Project Acquisition | |
|---|---|---|---|---|
| | **Concept** | **Development** | **Implementation** | **Close-out** |
| Sample deliverables for each phase | Management plan | Project plan | Last work package | Completed work |
| | Preliminary cost estimate | Budgetary cost estimate | Definitive cost estimate | Lessons learned |
| | 3-level WBS | 6+-level WBS | Performance reports | Customer acceptance |
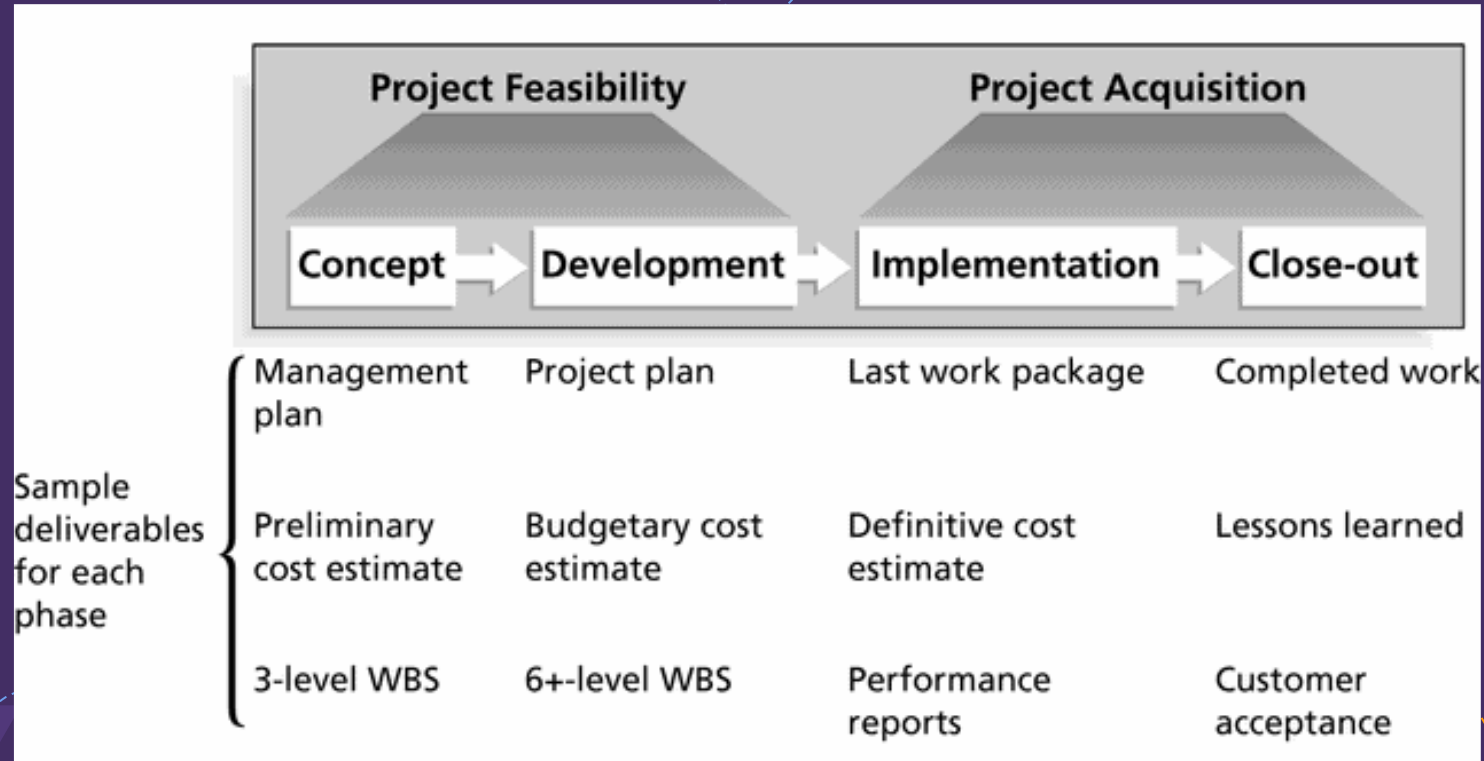
# PROJECT PHASES AND THE PROJECT LIFE CYCLE

◍ A **project life cycle** is a collection of project phases that defines:
- What work will be performed in each phase.
- What deliverables will be produced and when.
- Who is involved in each phase.
- How management will control and approve work produced in each phase.

◍ A **deliverable** is a product or service produced or provided as part of a project.

# PROJECT PHASES AND THE PROJECT LIFE CYCLE

◎ In the early phases of a project life cycle:

- Resource needs are usually lowest.

- The level of uncertainty (risk) is highest.

- Project stakeholders have the greatest opportunity to influence the project.

◎ In the middle phases of a project life cycle:

- The certainty of completing a project increases.

- More resources are needed.

◎ In the final phase of a project life cycle:

- The focus is on ensuring that project requirements were met.

- The sponsor approves completion of the project.

# THE IMPORTANCE OF PROJECT PHASES
## AND MANAGEMENT REVIEWS

⬭ A project should successfully pass through each of the project phases in order to continue on to the next.

⬭ Management reviews, also called <span style="color:red">phase exits</span> or <span style="color:red">kill points</span>, should occur after each phase to evaluate the project's progress, likely success, and continued compatibility with organizational goals.

# ROLE OF A PROJECT MANAGER

⬛ The role of a project manager is affected by the one-shot nature of the project

⬛ The role of a project manager is difficult when team members are still linked to their permanent work areas

◌ Members may be assigned to several projects simultaneously

⬛ Managers must rely on their communication skills and powers of persuasion

# PROJECT MANAGER ATTRIBUTES

- Leader & manager
- Facilitator, coordinator
- Communicator
- Credibility: Technical/ Administrative
- Work under pressure
- Goal-oriented
- Innovator

- Knowledgeable about the organization
- Political sensitivity
- Conflict: sense, confront, resolve
- Can deal with stress, chaos, ambiguity
- Planning and follow-through Ethical dilemmas

# PROJECT MANAGER DUTIES

- Reports to senior management
- Communicates with users
- Plans and schedules
- Obtains and allocates resources
- Controls risks
- Manages people
- Coordinates
- Implements quality assurance
- Controls the budget
- Delivers results

# PROJECT STAKEHOLDERS

◍ Stakeholders are the people involved in or affected by project activities

◍ Stakeholders include
❖ the project sponsor and project team
❖ support staff
❖ customers
❖ users
❖ suppliers
❖ opponents to the project

# HOW PROJECT MANAGEMENT RELATES TO OTHER DISCIPLINES

◍ Much of the knowledge needed to manage projects is unique to the discipline of project management

◍ Project mangers must also have knowledge and experience in
○ general management
○ the application area of the project

# THE PROJECT MANAGEMENT PROFESSION

- The job of IT Project Manager is in the list of the top ten most in demand IT skills

- Professional societies like the Project Management Institute (PMI) have grown tremendously

- Project management research and certification programs continue to grow
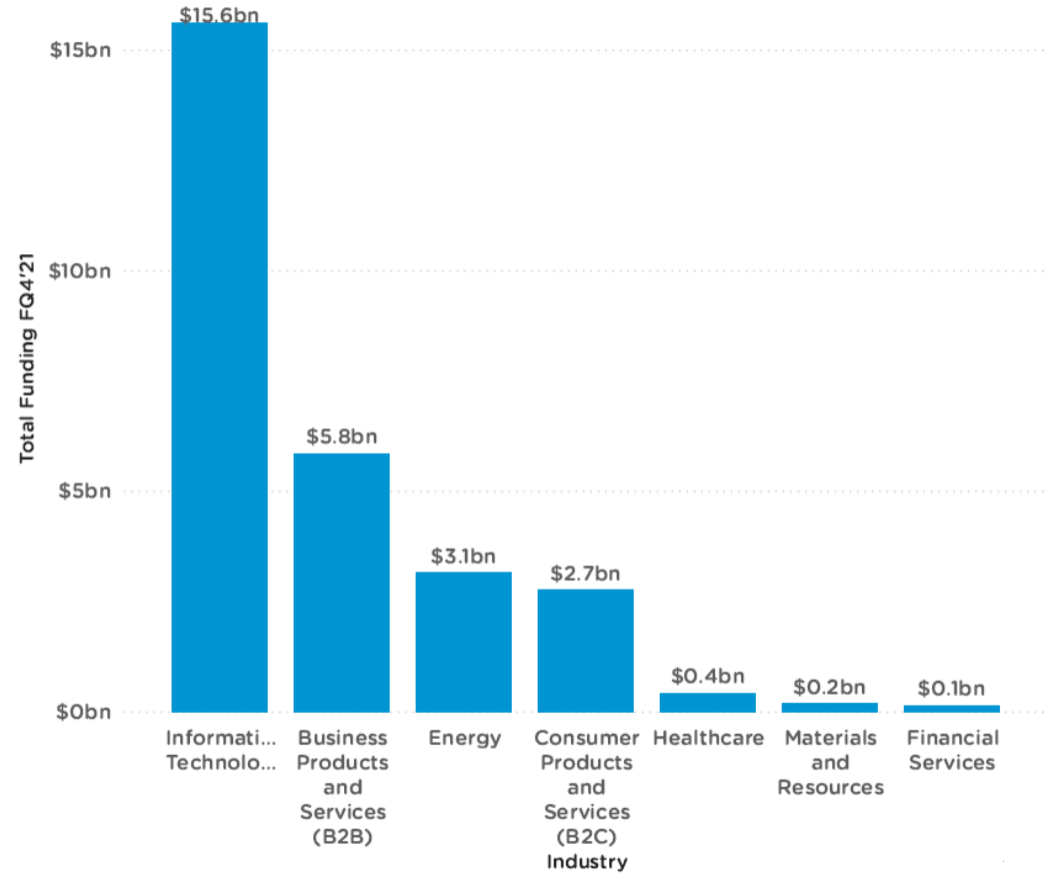
# PROJECT MANAGEMENT TO MANY AREAS

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◍ Project management applies to work as well as personal projects

◍ Project management applies to many different disciplines (IT, construction, finance, sports, event planning, etc.)

◍ Project management skills can help in everyday life
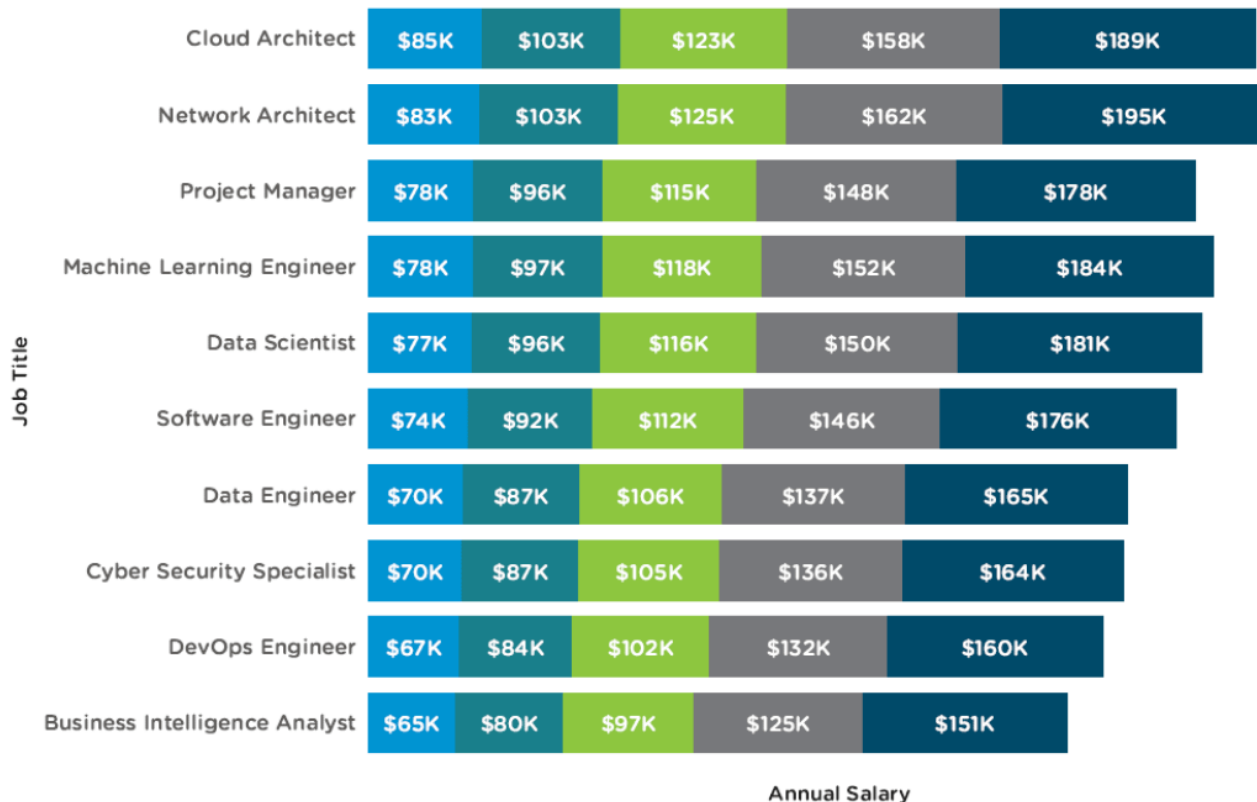
These industries have the money to hire

-Jan 2022

The most in-demand tech jobs and their salaries divided by percentiles.



Source: Economic Research Institute

**Percentiles by Jobs**

● 10th Percentile ● 25th Percentile ● Mean ● 75th Percentile ● 90th Percentile

| Job Title | 10th Percentile | 25th Percentile | Mean | 75th Percentile | 90th Percentile |
|---|---|---|---|---|---|
| Cloud Architect | $85K | $103K | $123K | $158K | $189K |
| Network Architect | $83K | $103K | $125K | $162K | $195K |
| Project Manager | $78K | $96K | $115K | $148K | $178K |
| Machine Learning Engineer | $78K | $97K | $118K | $152K | $184K |
| Data Scientist | $77K | $96K | $116K | $150K | $181K |
| Software Engineer | $74K | $92K | $112K | $146K | $176K |
| Data Engineer | $70K | $87K | $106K | $137K | $165K |
| Cyber Security Specialist | $70K | $87K | $105K | $136K | $164K |
| DevOps Engineer | $67K | $84K | $102K | $132K | $160K |
| Business Intelligence Analyst | $65K | $80K | $97K | $125K | $151K |

Annual Salary

👍

Thanks!