

# UPWARDLY GLOBAL

**Reskilling & New Skilling  
Market Research**



# APPROACH

Conducted regional market scan of job opportunities and trends in four metropolitan areas: New York, DMV, Chicago, and San Francisco for five key sectors of Healthcare, Engineering, IT, Finance & Accounting, and Logistics using publicly available data, publications, and Burning Glass dataset



**RESEARCH  
NATIONAL &  
REGIONAL  
EMPLOYMENT  
DATA**



**ANALYZE IN-  
DEMAND SKILLS  
AND  
CREDENTIALS &  
DEVELOP  
CAREER  
PATHWAYS**



**RESEARCH RESKI  
LLING AND  
UPSKILLING  
PROGRAMS**



**CROSS-  
REFERENCE  
EMPLOYER  
DEMAND & HIRING  
INITIATIVES**

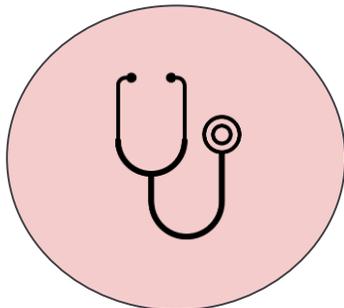


**INTRODUCE AND  
CULTIVATE  
CORPORATE  
PARTNERS**

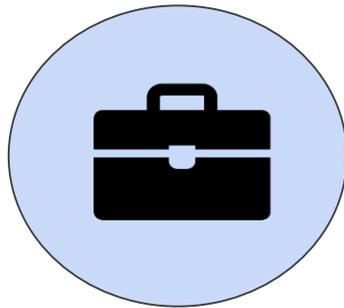
# CAREER COMMUNITIES

## WHAT ARE THE CAREER COMMUNITIES?

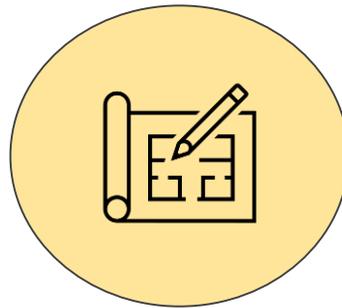
- Job coaching focused on your industry and understanding of career pathways
- Provide Slack community
- Focus on supporting training (reskilling)
- Industry specific support from volunteers
- Industry specific events
- Strong employer partnerships
- Understanding of job market data



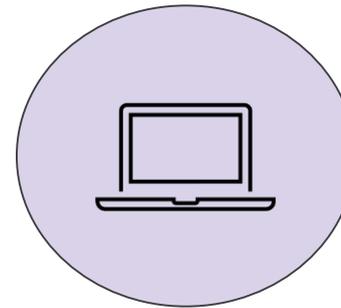
HEALTHCARE



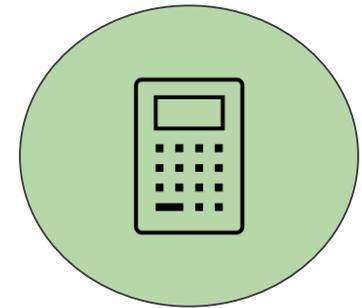
BLO/M/HR



ENGINEERING



IT/TECH



FINANCE

# MARKET ANALYSIS

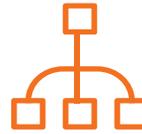
# EXECUTIVE SUMMARY



**HEALTHCARE**



**INFORMATION  
TECHNOLOGY**



**BUSINESS  
OPERATIONS**



**FINANCE &  
ACCOUNTING**



**ARCHITECTURE  
& ENGINEERING**

**Projected Growth (2019-29):**



Healthcare: 15%, Information Technology: 11%, Business Operations and Finance: 5%, and Engineering: 3%

**Key Soft Skills Requested Across  
all Sectors:**



Communication



Teamwork/Collaboration

**Key Software / Programming Skills  
Requested Across all Sectors:**



Microsoft Excel



Structured Query Language

**Valuable Credentials Across all  
Sectors:**



Project Management Certification

# Nearly 5.5 Million Available Jobs

**442,805** Healthcare Jobs  
**148,855** IT Jobs  
**362,112** Business Ops Jobs  
**126,165** Finance & Acct Jobs  
**68,249** Arch & Engineering Jobs

**245,284** Healthcare Jobs  
**185,008** IT Jobs  
**227,215** Business Ops Jobs  
**80,293** Finance & Acct Jobs  
**65,102** Arch & Engineering Jobs



**CHI METRO**



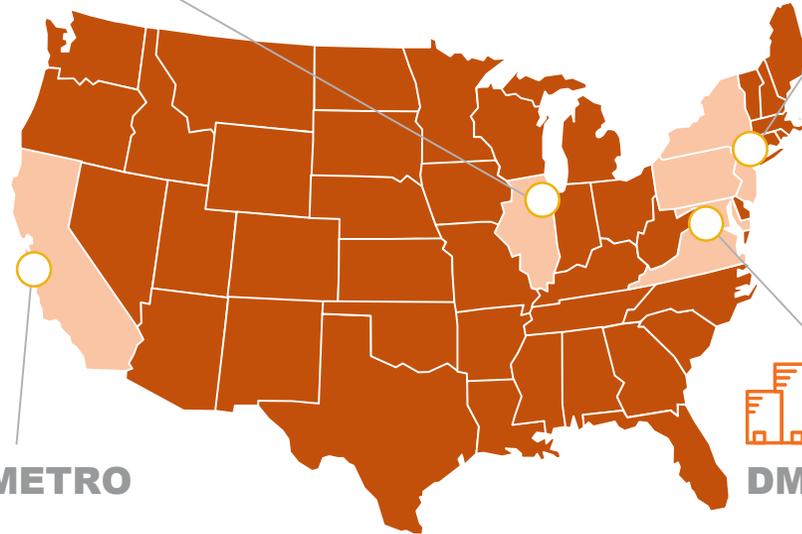
**NYC METRO**



**SF METRO**



**DMV METRO**



**1,189,801** Healthcare Jobs  
**322,337** IT Jobs  
**654,210** Business Ops Jobs  
**319,538** Finance & Acct Jobs  
**100,229** Arch & Engineering Jobs

**266,207** Healthcare Jobs  
**241,311** IT Jobs  
**299,310** Business Ops Jobs  
**107,154** Finance & Acct Jobs  
**68,901** Arch & Engineering Jobs

# SECTOR LONG TERM OUTLOOK

**Research indicates that the four metro areas are seeing steady job growth month over month since the initial economic downturn.**

- Healthcare, Communications & IT, Finance, and Warehouse & Delivery are among the 12 sectors labeled “essential,” therefore resilient to the pandemic by the Economic Policy Institute
- Among the top skills requested by employers are analytical reasoning, artificial intelligence, and business analysis highlighting the need for data literacy in potential candidates
- Remote work has increased the need for IT skills in network engineering, customer service, and cloud-based services
- Trends in the healthcare sector include expanded telehealth and remote monitoring as well as growth in the diagnostics and lab testing sub-sectors

## SECTOR

## LONG TERM OUTLOOK

### Information Technology

Information Technology and Computer occupations are expected to grow **much faster than average** over the next decade with focus areas being **cloud computing, big data, and information security.**

### Architecture & Engineering

Engineering occupations are expected to see the most growth in the upcoming decade as the U.S. increases demand for **infrastructure projects, renewable energy, oil & gas extraction, and robotics.**

### Healthcare

There is a **substantial demand** for healthcare professionals in the U.S. as a result of an aging population and more recently the COVID-19 pandemic. Occupations such as **personal care aides, medical assistants, and health information technicians** are in high demand and are less likely to require board-certification and licenses.

### Finance & Accounting

Finance and accounting occupations are expected to grow faster than the average for all occupations. Due to increased globalization, a growing economy, and a complex tax and regulatory environment **accountants and auditors** are projected to be in greatest demand.

### Business Operations

The increasing usage of big data and market research in order to understand customers and product demand, is expected to continue the growing demand for **market research analysts.**

# COVID-19 IMPACT: SECTOR TRENDS

## SHORT TERM TRENDS & OUTLOOK



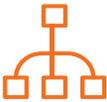
### Healthcare

The pandemic has accelerated the adoption of digital health tools such as **telehealth and remote monitoring**. Healthcare sub-sectors such as outpatient surgical centers, physical therapy, home healthcare, and dental services are not expected to make a complete recovery until 2022 according to S&P while **diagnostics, lab testing, and life sciences** have experienced a net gain.



### Information Technology

Widespread adoption of remote work during the pandemic has led to increased demand for **IT operations, help desk, system engineering roles, and cloud-based services**. However, as overall job postings have declined during this time, it has led to an **increase in competition** for these roles.



### Business Operations

As e-commerce sales soar, **warehouse and logistics services employment is at an all time high**. The pandemic has accelerated the shift to online buying / food delivery and stressed the need for supply chain resilience. Meanwhile, as businesses adjust to new realities, **predictive analytics for sales forecasting and data-driven marketing strategies** will be key to business strategy.



### Finance & Accounting

Those employed in financial operations occupations are more likely to have the ability to work remotely in contract to service occupations. As a result of telework, **finance and accounting occupations will rely more on technology and automation**.



### Architecture & Engineering

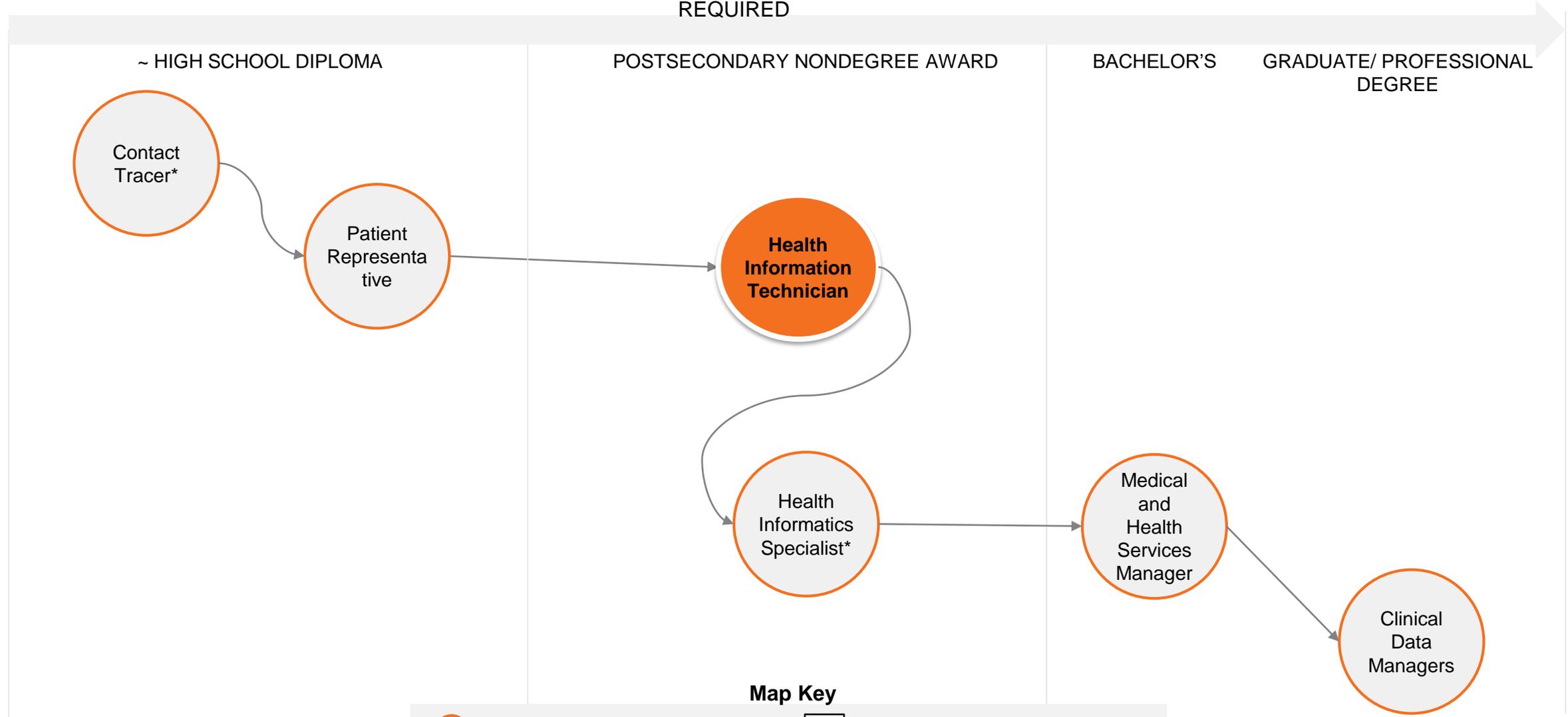
Potential shifts in the engineering workforce due to the pandemic include **increased manufacturing, embracing AI, and stronger communication**. As engineering becomes increasing interdisciplinary, **soft skills such as communication and teamwork** will be key.

# HEALTHCARE INSIGHTS

# HEALTHCARE: HEALTH INFORMATICS & SUPPORT SERVICES

## CAREER PATHWAYS

INCREASING LEVELS OF EDUCATION / TRAINING REQUIRED



\*Updated in O\*NET-SOC 2019 Code

**Map Key**

-  High Demand in Focus Metros
-  Licensing or Certification required

# HEALTHCARE: HEALTH INFORMATICS & SUPPORT SERVICES

## EXAMPLE PATHWAY – SUMMARY

### Health Information Technician

Compile, process, and maintain medical records of hospital and clinic patients in a manner consistent with medical, administrative, ethical, legal, and regulatory requirements of the health care system.

**Common Job Titles:** Medical Billing Specialist, Medical Records Clerk, Medical Scribe

**BG Market Salary:** (Aggregate of Focus Metro Regions)



**Demand:** (Number of Job Postings, Last 12 Months)

SF 207	CHI 609	DMV 620	NYC 1671
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**Top Employers:** 1. Anthem Blue Cross 2. Northwell Health 3. Nomad Health

**Certifications Requested:** Certified Professional Coder – 7%, Registered Health Info. Tech. – 6%, Medical Billing and Coding Certification – 6%

Specialized Skills	Technology Skills
Medical Coding	Microsoft Office – Excel
Medical Billing	IDC-10
Customer Billing	EPIC Systems
Customer Service	SQL
Patient Care	ICD-9-CM-Coding

Source: Data gathered from Emsi Database

# HEALTHCARE: THERAPEUTIC SERVICES

## TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
Nursing Assistant	+9.8% 
Medical Assistant	+25.5% 
Pharmacy Technician	+11% 
Pharmacy Aide	-3.8% 
Licensed Practical Nurse (LPN)	+11.2% 
Personal Care / Home Health Aide	+31% 
Registered Nurse (RN)	+17.3% 
Medical and Health Services Manager	+18.6% 
Physician Assistant	+38.8% 
Pharmacist	+6.3% 

# HEALTHCARE: HEALTH INFORMATICS & SUPPORT SERVICES

## TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
Medical Secretary	+20% 
Patient Representative	+4.3% 
Medical Transcriptionist	-5.9% 
Community Health Worker	+14.9% 
Health Information Technician	+13.8% 
Health Education Specialist/ Health Educator	+17.1% 
Epidemiologist	+3.9% 
Health Informatics Specialist/ Informatics Nurse Specialist	+10.8% 
Clinical Data Managers	+33.9% 
Medical and Health Services Manager	+18.6% 

# HEALTHCARE: DIAGNOSTICS SVCS & BIOTECHNOLOGY

## RESEARCH TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
Phlebotomist	+23.5% 
Laboratory Technician	+14.4% 
Laboratory Technologist	+12.5% 
Diagnostic Medical Sonographer	+22.6% 
Clinical Research Coordinators	+11.4% 

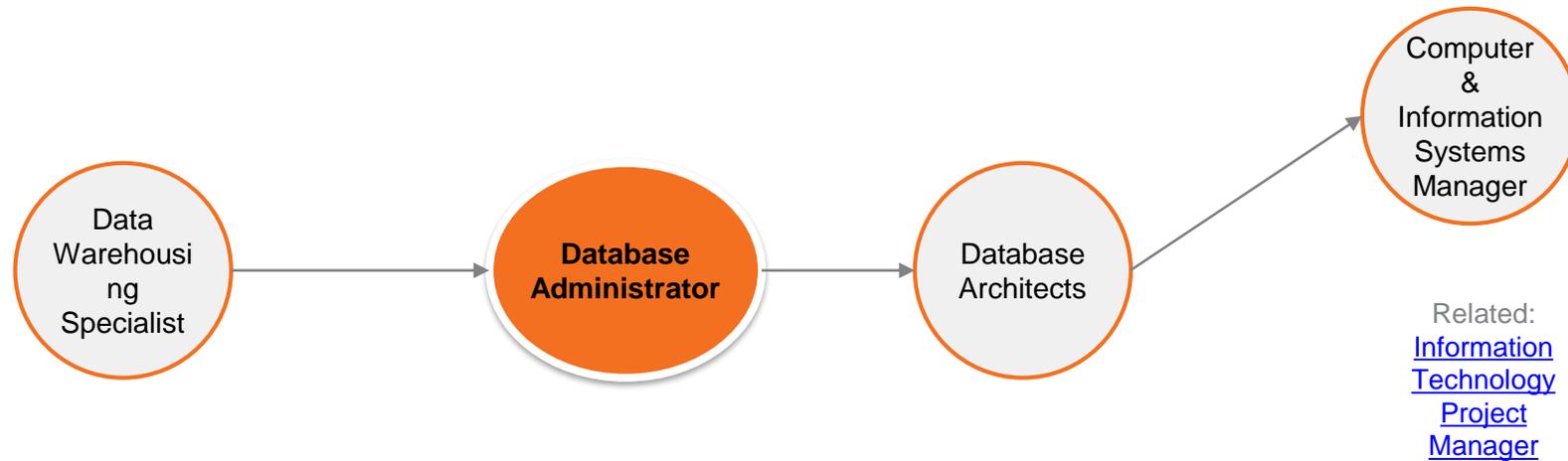
# **INFORMATION TECHNOLOGY INSIGHTS**

# IT: NETWORK SYSTEMS

## CAREER PATHWAYS

INCREASING LEVELS OF EDUCATION / TRAINING  
REQUIRED

Job Zone Four: Considerable Preparation Needed



Map Key: ○ High Demand in Focus Metros

# IT: NETWORK SYSTEMS

## OCCUPATION – SUMMARY

### Database Administrator

Administer, test, and implement computer databases, applying knowledge of database management systems. Coordinate changes to computer databases. May plan, coordinate, and implement security measures to safeguard computer databases.

**Common Job Titles:** Data Engineer, Database Administrator, Salesforce Administrator

**BG Market Salary:** (Aggregate of Focus Metro Regions)



**Demand:** (Number of Job Postings, Last 12 Months)

SF	CHI	DMV	NYC
3,735	3,543	5,977	8,549

**Top Employers:** 1. Amazon 2. National Geospatial Intelligence Agency 3. General Dynamics

**Certifications Requested:** Security Clearance – 9%, CompTIA Security+ - 2%

Specialized Skills	Technology Skills
ETL	SQL
Database Administration	Python
Data Warehousing	Oracle
Big Data	Teradata DBA
Pipeline (Computing)	Java

# IT: NETWORK SYSTEMS

## TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
Computer Network Support Specialist	+10.6% 
Network and Computer Systems Administrator	+8.7% 
Telecommunications Engineering Specialist	+9.1% 
Data Warehousing Specialist	+10.9% 
Database Administrator	+13.5% 
Computer Network Architect	+8.5% 
Database Architect	+10.9% 
Computer & Information Systems Manager	+14.7% 

# IT: INFORMATION SUPPORT & SERVICES

## TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
Document Management Specialists	+11.0% 
Computer User Support Specialists	+13.8% 
Geographic Information Systems Technicians	+12.1% 
Business Intelligence Analyst	+10.9% 
Computer Systems Analyst	+10.9% 
Information Security Analyst	+29.2% 
Computer Systems Engineer / Architect	+11.2% 
Information Technology Project Manager	+11.0% 

# IT: DIGITAL COMMUNICATION & SOFTWARE DEVELOPMENT

## TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
Graphic Designer	+7.2% 
Web Administrator	+10.2% 
Multimedia Artists and Animators	+7.2% 
Software Quality Assurance Engineer / Tester	+11.3% 
Computer Programmer	-5.0% 
Web Developer	+19.3% 
Software Developer, Systems Software	+19.2% 
Software Developer, Applications	+35.7% 

# **BUSINESS OPERATIONS INSIGHTS**

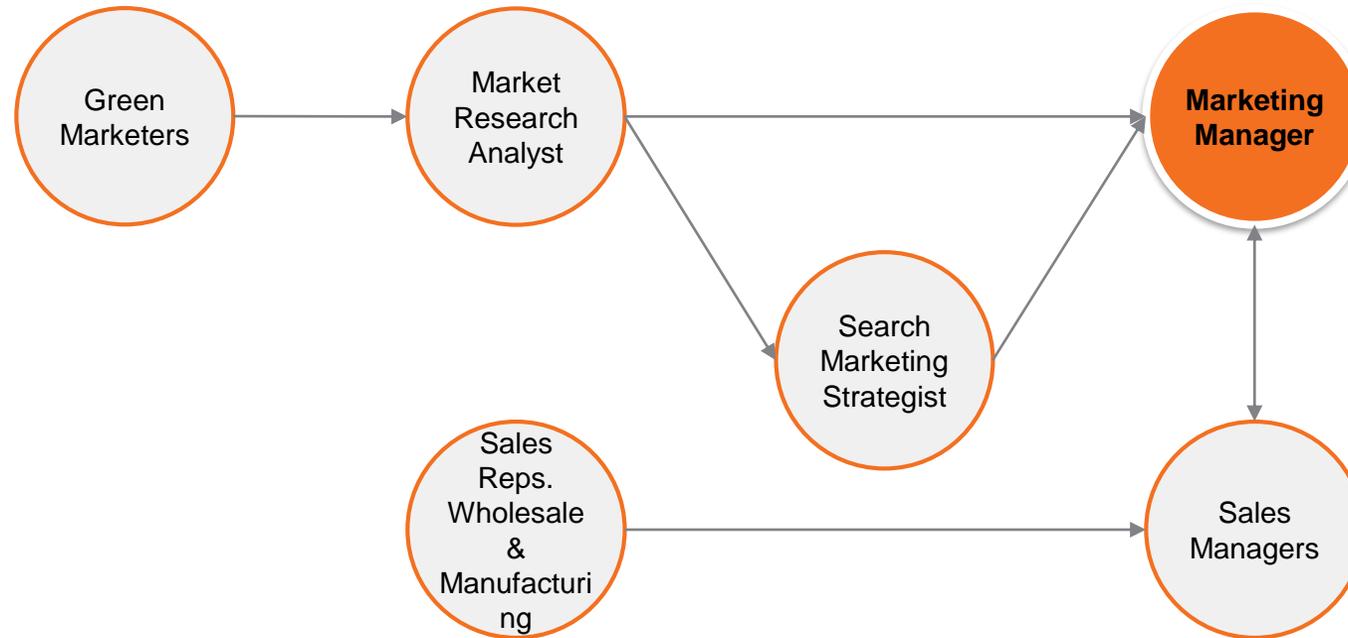
# BUSINESS OPS: MARKETING & SALES

## CAREER PATHWAYS

INCREASING LEVELS OF EDUCATION / TRAINING  
REQUIRED

Job Zone Four: Considerable Preparation Needed

Job Zone Five: Extensive  
Preparation Needed



Map Key: ○ High Demand in Focus Metros

# BUSINESS OPS: MARKETING & SALES

## EXAMPLE PATHWAY – SUMMARY

### Marketing Managers

Plan, direct, or coordinate marketing policies and programs, such as determining the demand for products and services offered by a firm and its competitors and identify potential customers.

**Common Job Titles:** Product Manager,, Digital Marketing Manager

**BG Market Salary:** (Aggregate of Focus Metro Regions)



**Demand:** (Number of Job Postings, Last 12 Months)

SF	CHI	DMV	NYC
11,461	17,979	7,290	26,645

**Top Employers:** 1. Facebook 2. JP Morgan Chase 3. Amazon

**Certifications Requested:** N/A

Specialized Skills	Technology Skills
Product Management	Microsoft Office - Excel
Marketing	Software as a Service (SaaS)
Project Management	Salesforce
Budgeting	SQL
Product Development	Google Analytics

# BUSINESS OPS: OPERATIONS MANAGEMENT

## TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
Fundraiser	+17.0% 
Online Merchant	+10.7% 
Purchasing Agent	-4.7% 
Operations Research Analyst	+28.5 
Security Management Specialist	+8.2% 
Regulatory Affairs Specialist	+9.0% 
Cost Estimator	+12.8% 
Purchasing Manager	+7.8% 
Management Analyst	+13.9% 
Business Continuity Planners	+9.7% 
Compliance Manager	+10.6% 

# BUSINESS OPS: MARKETING & SALES

## TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
Green Marketers	+11.5% 
Market Research Analyst	+25.7% 
Sales Reps. Wholesale & Manufacturing, <i>Except</i> Technical & Scientific Products	+6.3% 
Search Marketing Strategist	+11.0% 
Sales Reps. Wholesale & Manufacturing, Technical & Scientific Products	+5.9% 
Sales Managers	+9.1% 
Marketing Manager	+13.2% 
Sales Engineer	+8.5% 

# BUSINESS OPS: HUMAN RESOURCES MANAGEMENT

## TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
Human Resources Assistants	+0.4% 
Human Resources Specialist	+10.1% 
Compensation, Benefits, and Job Analysis Specialist	+8.1% 
Training and Development Specialist	+14.4% 
Labor Relations Specialist	-6.5% 
Training and Development Manager	+13.2% 
Human Resources Managers	+11.3% 
Equal Opportunities Representative	+8.6% 

# BUSINESS OPS: LOGISTICS

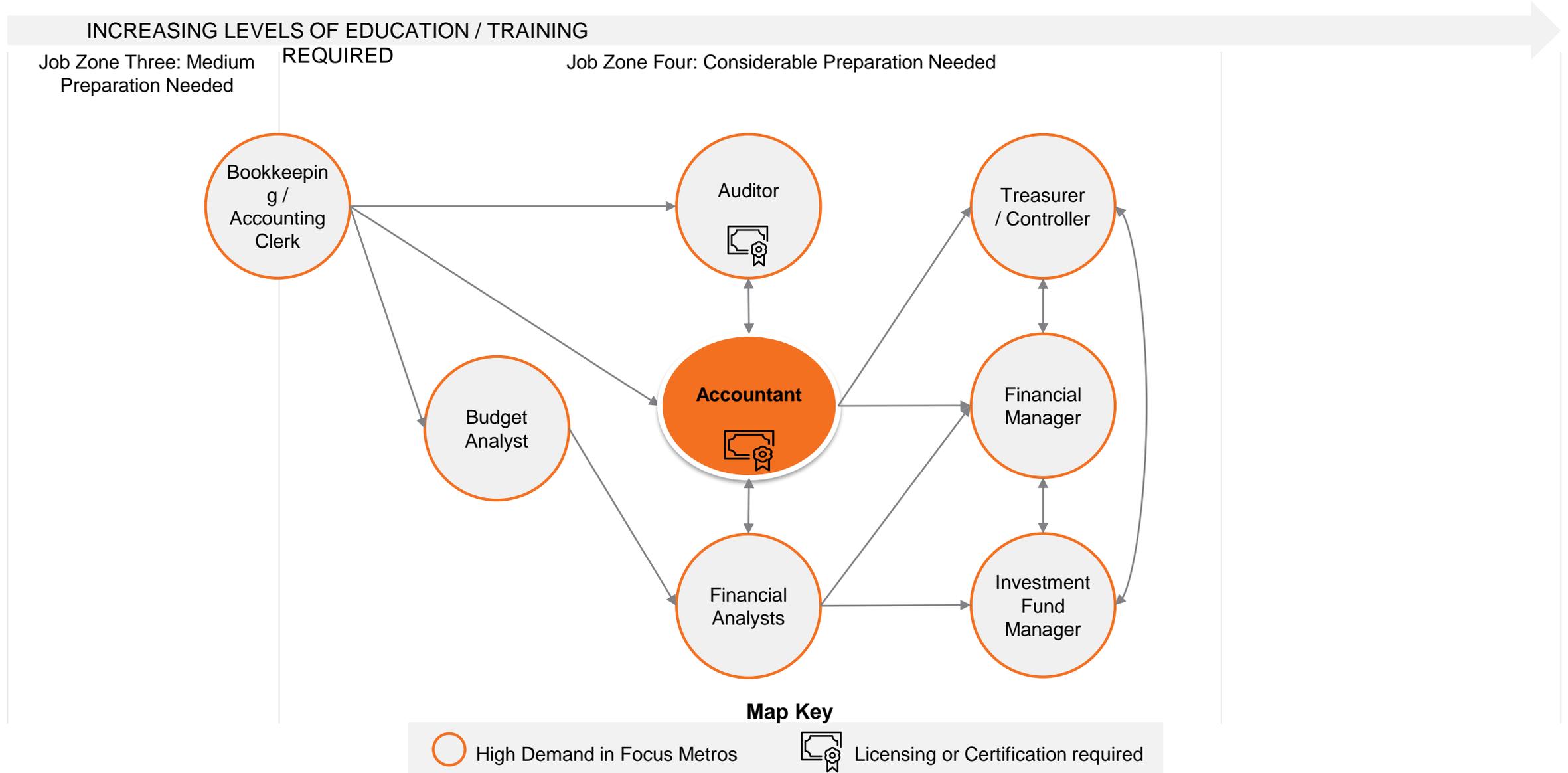
## TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
<b>Storage and Distribution Managers</b>	+10.3% 
<b>Logistician / Logistics Specialist</b>	+9.5% 
<b>Logistics Analyst</b>	+9.3% 
<b>Logistics Manager</b>	+9.3% 
<b>Transportation Manager</b>	+8.3% 
<b>Logistics Engineer</b>	+8.8% 
<b>Supply Chain Managers</b>	+10.6% 

# **FINANCE & ACCOUNTING INSIGHTS**

# FINANCE & ACCT: BUSINESS FINANCE & ACCOUNTING

## CAREER PATHWAYS



# FINANCE & ACCT: BUSINESS FINANCE

## EXAMPLE PATHWAY – SUMMARY

### Accountant

Analyze financial information and prepare financial reports to determine or maintain record of assets, liabilities, profit and loss, tax liability, or other.

**Common Job Titles:** Senior / Junior / Cost Accountant

**BG Market Salary:** (Aggregate of Focus Metro Regions)



**Demand:** (Number of Job Postings, Last 12 Months)

SF	CHI	DMV	NYC
3,619	4,572	3,473	10,349

**Top Employers:** 1. Intuit 2. Deloitte  
3. Ernst & Young

**Certifications Requested:** Certified Public Accountant (CPA) ~ 38%

Specialized Skills	Technology Skills
Accounting	Microsoft Office - Excel
Generally Accepted Accounting Principles (GAAP)	Enterprise Resource Planning (ERP)
Account Reconciliation	QuickBooks
Financial Statements	Accounting Software
General Ledger	SAP

# FINANCE & ACCT: SECURITIES & INVESTMENTS

## TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
Financial Services Sales Agent	+2.7% 
Brokerage Clerk	+1.3% 
Fraud Examiner	+8.1% 
Securities & Commodities Sales Agent	+2.6% 
Personal Financial Advisor	+12.1% 
Securities & Commodities Trader	+2.6% 
Investment Underwriter	+5.3% 
Risk Management Specialist	+9.1% 
Financial Quantitative Analyst	+9.3% 

# FINANCE & ACCT: BUSINESS FINANCE & ACCOUNTING

## TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
Tax Preparer	+13.2% 
Bookkeeping / Accounting Clerk	-0.1% 
Tax Examiners	-0.2% 
Budget Analyst	+6.9% 
Financial Analyst	+10.6% 
Cost Estimators	+12.8% 
Auditor	+11.9% 
Accountant	+11.4% 
Financial Manager	+20.0% 
Treasurer / Controller	+20.0% 
Economist	+7.1% 
Investment Fund Manger	+10.5% 

# FINANCE & ACCT: INSURANCE

## TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
Insurance Policy Processing Clerk	+8.9% 
Insurance Claims Clerk	+9.0% 
Insurance Adjuster	-1.9% 
Insurance Sales Agent	+7.1% 
Claims Examiner	-2.1% 
Insurance Underwriter	-6.0% 
Actuary	+22.2% 

# FINANCE & ACCT: BANKING SERVICES

## TOP ROLES AT-A-GLANCE

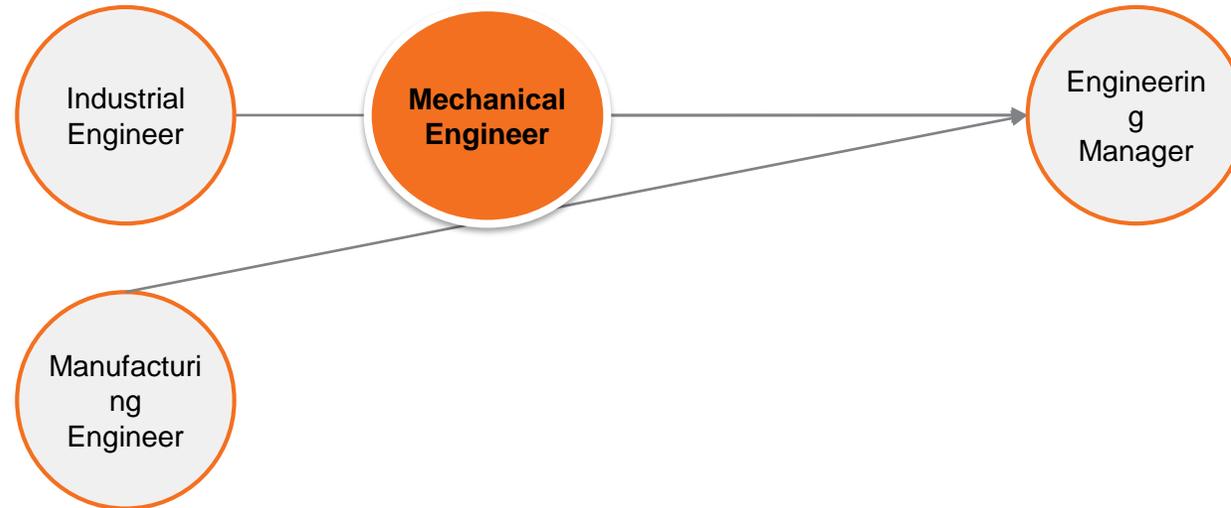
	Projected Growth, 10 Years
Teller	-10.7% 
Loan Interviewer / Clerk	+7.8% 
Credit Counselor	+12.9% 
Loan Officer	+7.1% 
Credit Analyst	+6.3% 
Credit Authorizers	-4.0% 

# **ARCHITECTURE & ENGINEERING INSIGHTS**

# ARCH. & ENG.: ENGINEERING CAREER PATHWAYS

INCREASING LEVELS OF EDUCATION / TRAINING REQUIRED

Job Zone Four: Considerable Preparation Needed



Map Key:  High Demand in Focus Metros

# ARCH. & ENG.: ENGINEERING

## OCCUPATION – SUMMARY

### Mechanical Engineer

Analyze financial information and prepare financial reports to determine or maintain record of assets, liabilities, profit and loss, tax liability, or other.

**Common Job Titles:** Mechanical Design Engineer, Design Engineer, Reliability Engineer

**BG Market Salary:** (Aggregate of Focus Metro Regions)



**Demand:** (Number of Job Postings, Last 12 Months)

SF	CHI	DMV	NYC
2,257	2,415	4,479	4,853

**Top Employers:** 1. Northrop Grumman 2. Lawrence Livermore National Laboratory 3. Sandia Corporation

**Certifications Requested:** Security Clearance – 9%, ABET – 6%, Licensed Professional Engineer – 5%

Specialized Skills	Technology Skills
Mechanical Engineering	AutoCAD
Project Management	SolidWorks
Mechanical Design	Microsoft Office – Excel
HVAC	Finite Element Analysis
Budgeting	Revit

# ARCH. & ENG.: ENGINEERING

## TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
Environmental Engineer	+10.8% 
Industrial Engineer	+13.5% 
Manufacturing Engineer	+8.0% 
Civil Engineer	+11.5% 
Mechanical Engineer	+9.6% 
Chemical Engineer	+8.4% 
Electrical Engineer	+10.9 
Architectural / Engineering Manager	+8.6% 

# ARCH. & ENG.: ARCHITECTURE

## TOP ROLES AT-A-GLANCE

	Projected Growth, 10 Years
Architectural Drafters	+9.9% 
Landscape Architects	+5.9% 
Architecture Teachers, Postsecondary	+10.9 
Architects	+5.0 
Marine Architects	+14.7% 
Architectural / Engineering Manager	+8.6% 