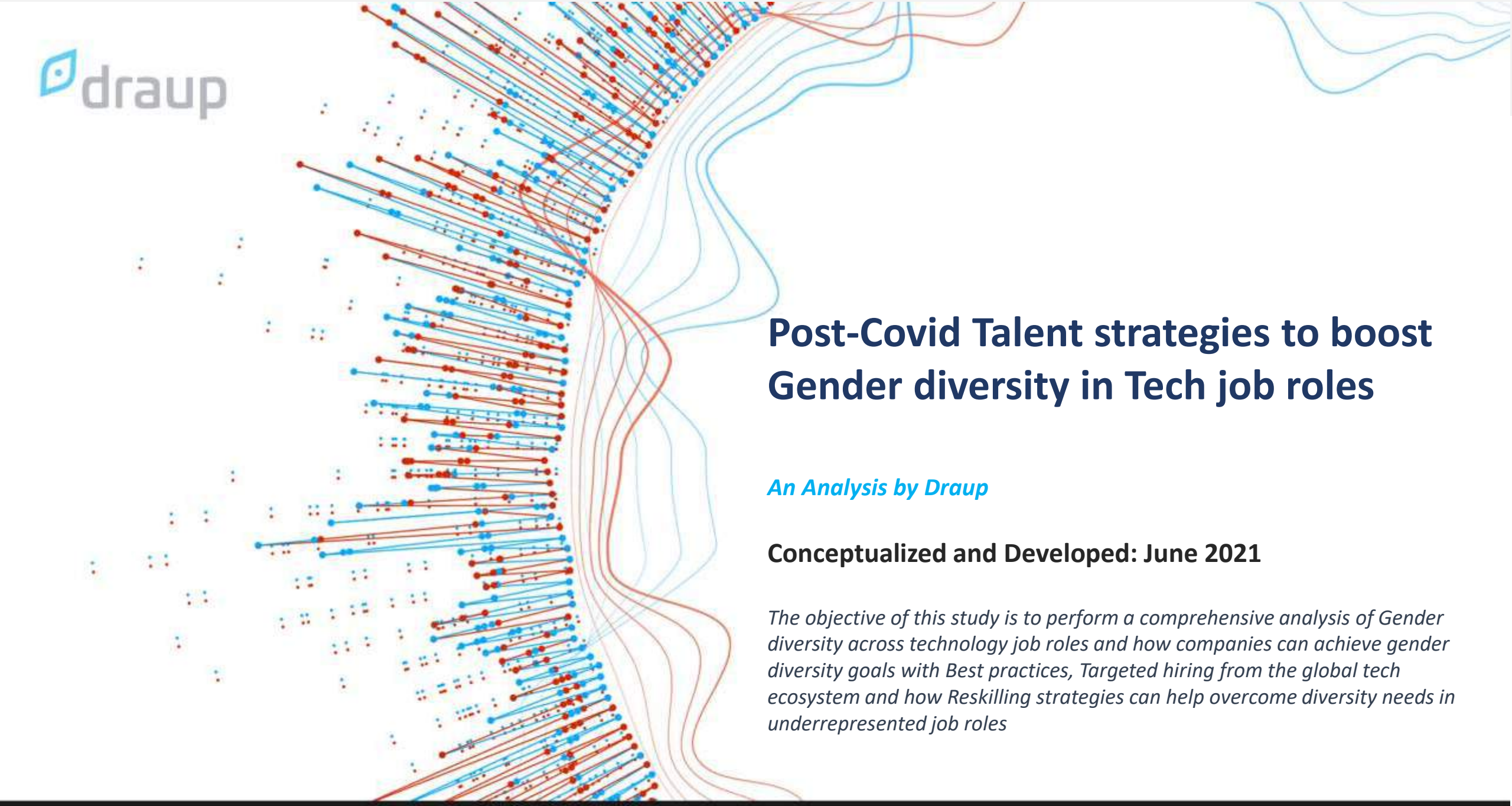


Post-Covid Talent strategies to boost Gender diversity in Tech job roles

An Analysis by Draup

Conceptualized and Developed: June 2021

The objective of this study is to perform a comprehensive analysis of Gender diversity across technology job roles and how companies can achieve gender diversity goals with Best practices, Targeted hiring from the global tech ecosystem and how Reskilling strategies can help overcome diversity needs in underrepresented job roles

CONTENTS

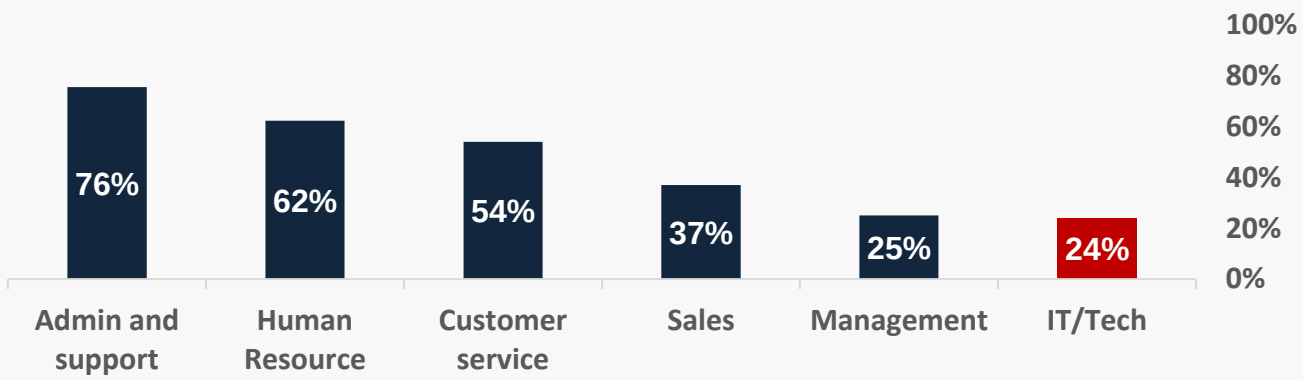
This Section contains:

- Function wise Diversity analysis
- Challenges of women in tech and Best practice followed by companies
- 'Targeted hiring' and 'Reskilling' strategies to meet current Gender diversity goals

As companies across industries are undergoing digital transformation, HR and Business leaders are struggling to find achieve healthy gender diversity in Technology job roles

Females are highly underrepresented in tech job roles compared to other functions such as Admin & Support, HR, Customer Service, Sales

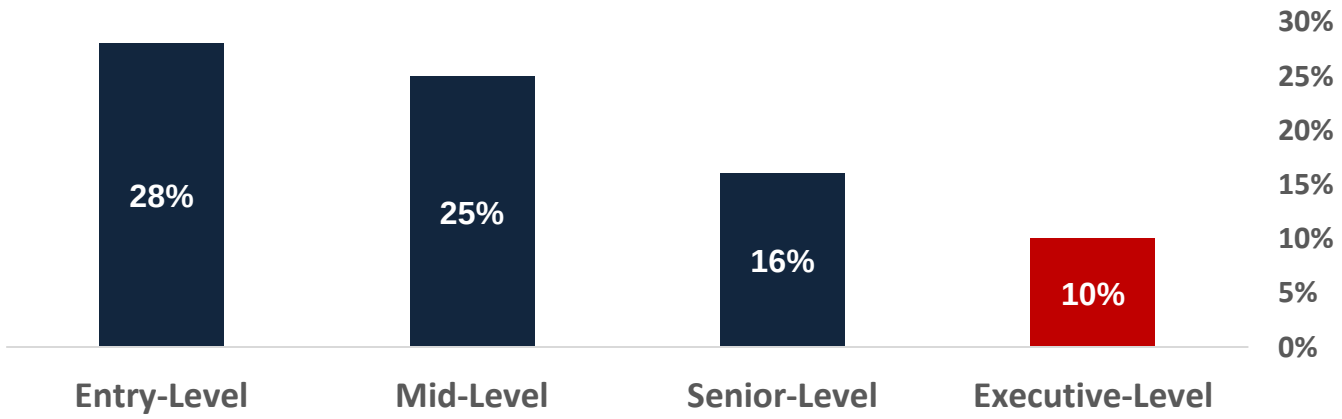
Global Function-wise representation of females[1]



Only 38% of women who majored in computer science are working in the field compared to 53% of men[1]

Women have **54%** of global jobs in accommodations and food service; sectors worst effected by pandemic[2]

Experience-wise representation of Female talent in Technical roles[1]



Only 1 Female CEO in Top 20 Tech Giants among the Fortune listed companies In 2020[3]

Women in the tech industry are **2x** as likely to be laid off than their male counterparts[4]

Source: 1. National Science Foundation **2.** Mckinsey **3.**Draup's analysis **4.** University of Exeter's Business School

To address the challenges of Female Technologists and increase the female representation at different experience levels, Companies are implementing variety of best practices

Major challenges faced by a Female Technologist at different experience levels

Entry level phase

- Stereotyping leading to lack of girls taking STEM subjects
- Gender Normative Bias sneaks in screening technology built by men
- High Expectations through career obsessive work schedules more common in men

Mid level phase

- Preference of males on tech project allocations over work hours flexibility
- Lack of confidence to discuss new tech ideas in front of male colleagues
- Post marital professional gaps effecting technical proficiency

Leadership phase

- High filtering based on technical criteria's sponsored by male dominated leadership
- Not considering women for CTO's, but externally appointing CFOs and CMOs
- Lack of distinctive brand image and PR of female tech CEO's

Best practices to address the challenges of Female technologists

1. Hiring process reengineering to **Remove Bias** in screening and onboarding
2. **Creating Transparency** about workforce and assessing diversity demographics
3. Creating **Employee Engagement** to develop company culture for females in technical jobs
4. **Creating Pathways** for women with clear job progressions for better prospects
5. **Linking Diversity to Performance** for senior managers to promote accountability
6. **Leadership Programs** with mentors from senior level to promote women

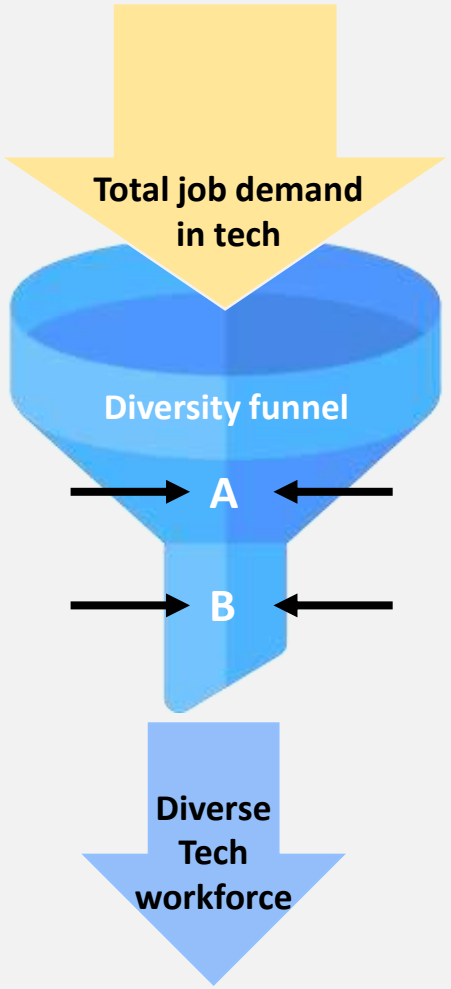
Note: The above analysis is done based on internal interviews conducted with 50+ females employed with experience in diverse sectors

Best practices and diversity programs take time to yield positive result, but Post Covid, 'Targeted hiring' and 'Reskilling' strategies are helping many firms meet current Gender diversity goals

Diversity compliances & pressure from Institutional Investors are putting Gender Diversity at the forefront of priorities for firms

HR leaders are building a diverse workforce by strictly adhering diversity goals for future tech job requirements through **Targeted hiring & Reskilling**

Targeted hiring and Reskilling strategies to meet the contemporary Gender diversity goals



A. Targeted hiring of female tech talent from the global ecosystem by taking advantage of **Virtual model**

- ✓ Tapping untapped global female tech talent pool
- ✓ Hiring fresh female tech graduates from leading education hubs
- ✓ Utilizing WFH model to hire female talent for desired tech jobs

B. Reskilling disrupted female tech talent and meet diversity goals for jobs having low female representation

- ✓ Upskilling female tech talent in disrupted job roles
- ✓ Providing viable career path to low demand job roles
- ✓ Providing opportunities to female with professional gaps

Souce: Draups's analysis

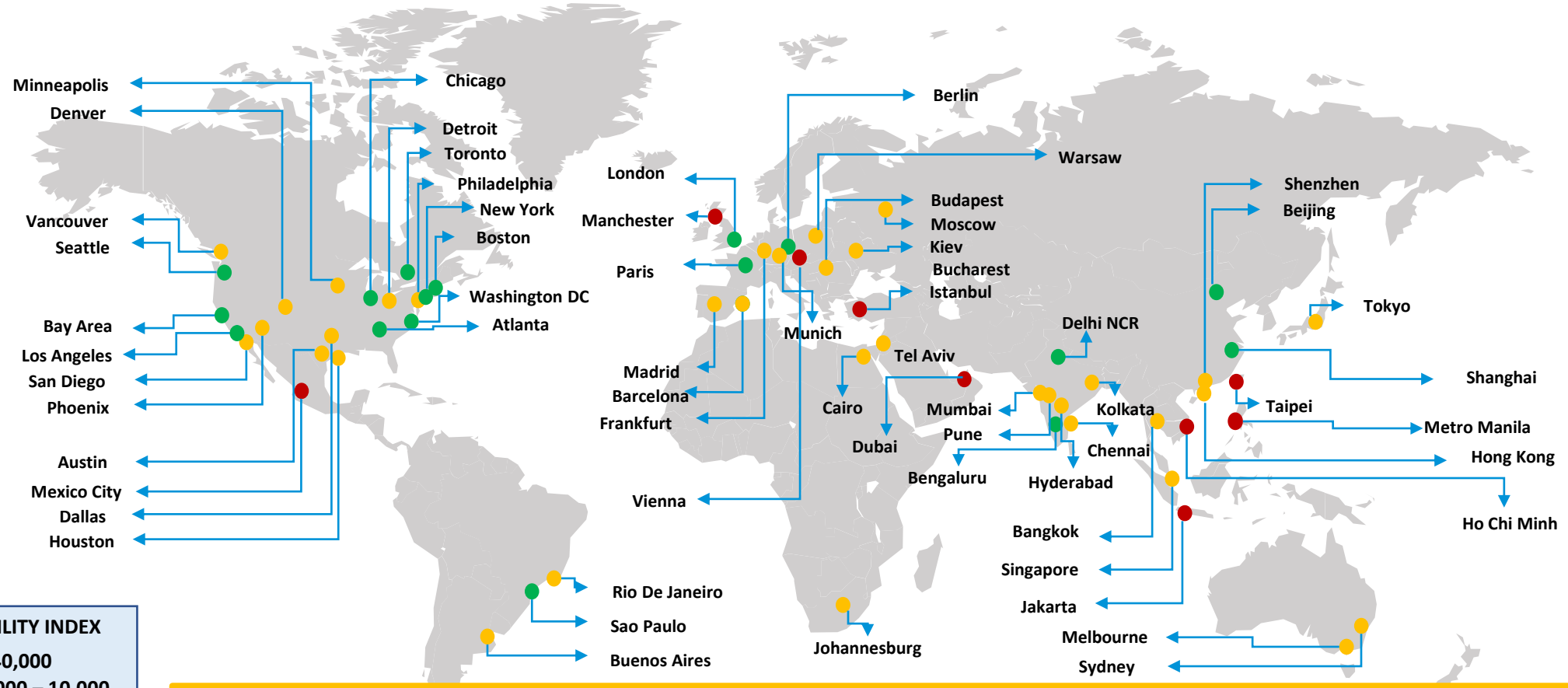
CONTENTS

This Section contains:
- Female Tech Talent hotspots
- Female Fresh Talent hotspots

Global Female technology talent hotspots: Leading firms are utilizing the current WFH model to their advantage by leveraging global tech ecosystem to hire quality female tech talent

FEMALE TECHNOLOGY TALENT HOTSPOTS

United States, **India**, and **China** are the top contributors to the global female tech talent; **San Francisco Bay Area**, **Greater New York**, **Bengaluru**, **Beijing**, **Shanghai**, and **Paris** are the key top MSAs with Female tech talent, each housing over **40,000** female tech professionals



TALENT AVAILABILITY INDEX

High	>40,000
Moderate	40,000 – 10,000
Low	<10,000

US has been taken as a sample location to analyze the gender diversity of employed professionals in tech jobs

Note : Draup diversity estimator model is used to analyse jobs by locations and skill type. More than 100+ female employment hotspots were identified using the female professional profiles analysis in the relevant Job roles and Job families. Very smaller locations with less than 10 female professionals are not included in the above map but can be investigated further through validations of profiles. The location list shows major MSAs with female tech talent

Global Fresh tech talent hiring: Virtual hiring model is also used by firms to cost-effectively hire fresh female tech talent pool from non-traditional locations with high supply of fresh female tech graduates

Growth rate of global Female CS (computer science) graduates (**7.2%**) is much higher than the growth rate of overall tech graduates (**5.4%**) during 2015 –19

Global CS Graduates	**1,200,000**
CAGR (2015-19)	**+5.38 %**
Global Female CS Graduates	**280,000**
CAGR (2015-19)	**+7.17 %**

China, India, United States, UK are the leading countries having positive growth of quality fresh female tech talent supply

India

CAGR **+ 3.5 %** | Female Fresh Talent **118,000 (49 %)**

Top Locations	Fresh CS Talent
Bengaluru	30,000
Delhi-NCR	26,000
Hyderabad	22,000

China

CAGR **+ 2.9 %** | Female Fresh Talent **81,600 (37.1 %)**

Top Locations	Fresh CS Talent
Shanghai	35,000
Beijing	29,000
Suzhou	18,000

United States

CAGR **+ 8.3 %** | Female Fresh Talent **38,900 (22 %)**

Top Locations	Fresh CS Talent
New York Area	7,500
Washington DC	5,900
Seattle	4,500

Russia

CAGR **- 1.9 %** | Female Fresh Talent **20,100 (26 %)**

United Kingdom

CAGR **+ 5.1 %** | Female Fresh Talent **6,000 (18 %)**

Germany

CAGR **+ 4.8 %** | Female Fresh Talent **3,600 (20 %)**

US has been taken as a sample location to analyze the gender diversity of fresh talent

Note: Fresh CS Talent is estimated for the year 2019; The CAGR is calculated for the period 2015-2019
Relevant courses for Technology field include includes Computer Science, Information Systems, Statistics & Mathematics

CONTENTS

This Section contains:
- Gender diversity analysis of Tech Job Clusters
- Location Intelligence for a sample in-demand and underrepresented job role – 'Cloud Engineer'

Gender diversity in US Tech jobs: Firms across US are concerned about high representation of female talent in low demand disruption-prone job roles and low representation of female in high growth job clusters

KEY TECH JOB CLUSTERS	TALENT SIZE IN US	FEMALE REPRSENTATION IN US	TALENT DEMAND GROWTH	POTENTIAL OF DISRUPTION
Product Design	180,000	44%	20%	MEDIUM
IT Admin and Support	300,000	40%	4%	HIGH
QA Testing	360,000	39%	4%	HIGH
Data Science & Engineering	480,000	31%	14%	LOW
IT Operations	800,000	26%	18%	MEDIUM
Software Engineering and Development	1,500,000	26%	20%	MEDIUM
Technical Architecture & Project Management	255,000	22%	20%	MEDIUM
Information Security	310,000	20%	15%	MEDIUM
Network Engineering	490,000	19%	5%	LOW
Cloud Computing	450,000	17%	17%	LOW

LOW DEMAND BUT HIGH FEMALE REP | HIGH DEMAND BUT LOW FEMALE REP | Female representation % vs overall | >14% | 8-14% | <8%

Note: Talent Size has been calculated based on publicly available talent profiles. Draup database and social professional platforms have been harvested to assess talent size and diversity proportions

Gender diversity in Cloud Computing Job Cluster of US: For most of the high demand roles in Cloud Computing, Female representation is alarmingly low

Cloud Engineer is the most in-demand job role and have the lowest female representation among Cloud Computing job roles in US

Sample in-demand job roles in Cloud Computing job family	Global Job demand increase (CAGR for 2020-2023)	Talent in USA	Female representation (in US)
Cloud Engineer	**42%**	**138,300**	**17%**
Cloud Consultant	33%	148,400	21%
Cloud Risk Analyst	30%	3,270	20%
Cloud Architect	30%	48,470	13%
Cloud Product Manager	27%	11,410	30%
Cloud Administrator	26%	22,500	18%
Cloud DevOps Analyst	20%	38,180	14%
Cloud Infrastructure Engineer	10%	2,780	16%

Note : DRAUP's proprietary talent module was used to analyse the job demand, talent size, female representation of cloud computing job cluster

Brief profile overview of a **'Cloud Engineer'**

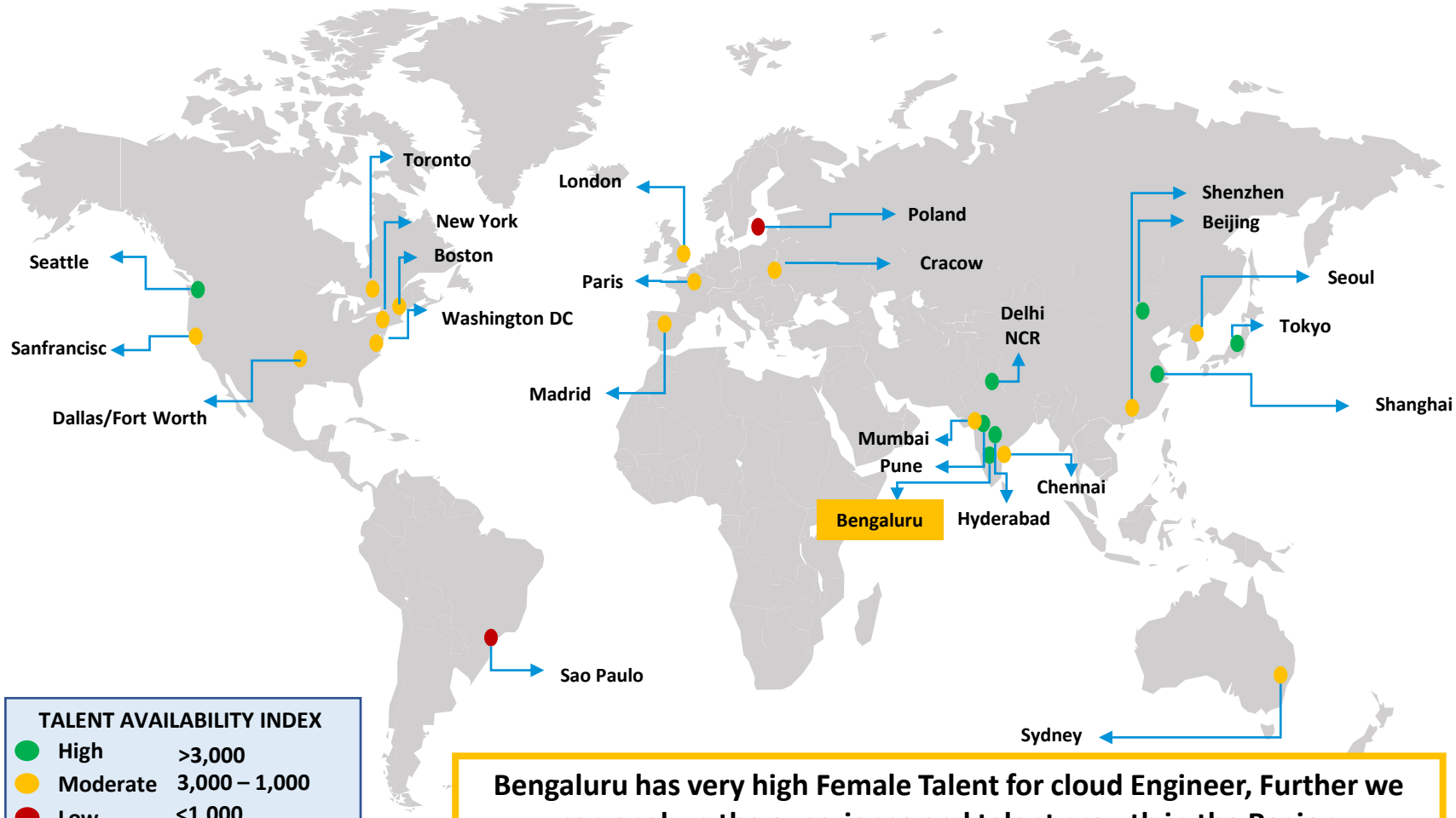
Cloud Engineer

Workload	Technical Skills
• Design and build cloud computing solutions, host services and create underlying software • Apply troubleshooting techniques to provide solutions and maintain cloud computing systems • Build plans, code pipelines develop an operational cloud-based delivery system	• Cloud Platforms: Azure, GCP, AWS stack • Scripting languages (Bash, Python, PowerShell) • OS and Servers (Windows, LINUX, Mac)

'Cloud Engineer', a sample role has been analyzed further

Cloud Engineer Female Talent Hotspot: Due to high remote working propensity of 'Cloud Engineer' roles, Many companies are utilizing global locations to hire and simultaneously increase the female representation in such roles

Top Location hotspots for hiring Female Cloud Engineer



TALENT AVAILABILITY INDEX

High	>3,000
Moderate	3,000 – 1,000
Low	<1,000

Bengaluru has very high Female Talent for cloud Engineer, Further we can analyze the experience and talent growth in the Region

	Top Locations across geographical regions with 'Cloud Engineer' talent	Talent Size	Median Base Pay
Americas	San Francisco, USA	3,020	USD 157K
	Seattle, USA	2,000	USD 143K
	Toronto, Canada	1,050	USD 81K
	Sao Paulo, Brazil	960	USD 31K
APAC	**Bengaluru, India**	13,500	USD 18K
	Delhi, India	4,620	USD 16K
	Tokyo, Japan	3,750	USD 35K
	Sydney, Australia	1,060	USD 92K
EMEA	London, UK	1,510	USD 61K
	Madrid, Spain	1,450	USD 64K
	Stockholm, Sweden	970	USD 55K

Low Cost and High Female Talent Location

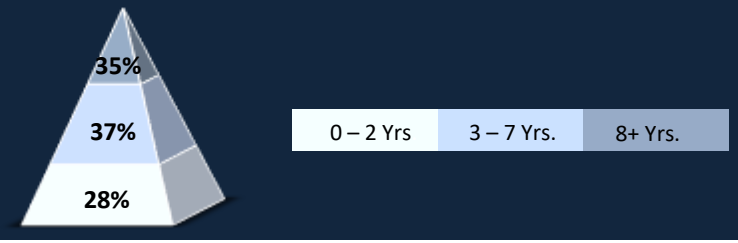
Note : DRAUP's proprietary talent module was used to analyse hotspots by locations and median base pay of cloud engineer

Sample location overview of Bengaluru: Post Covid, Companies across Industries are preferring locations like Bengaluru to hire female talent for roles roles like 'Cloud Engineer' due to high availability of female talent across all experience levels

Female Cloud Engineer Talent in Bengaluru

~13,500

Female Cloud Talent Split By Experience

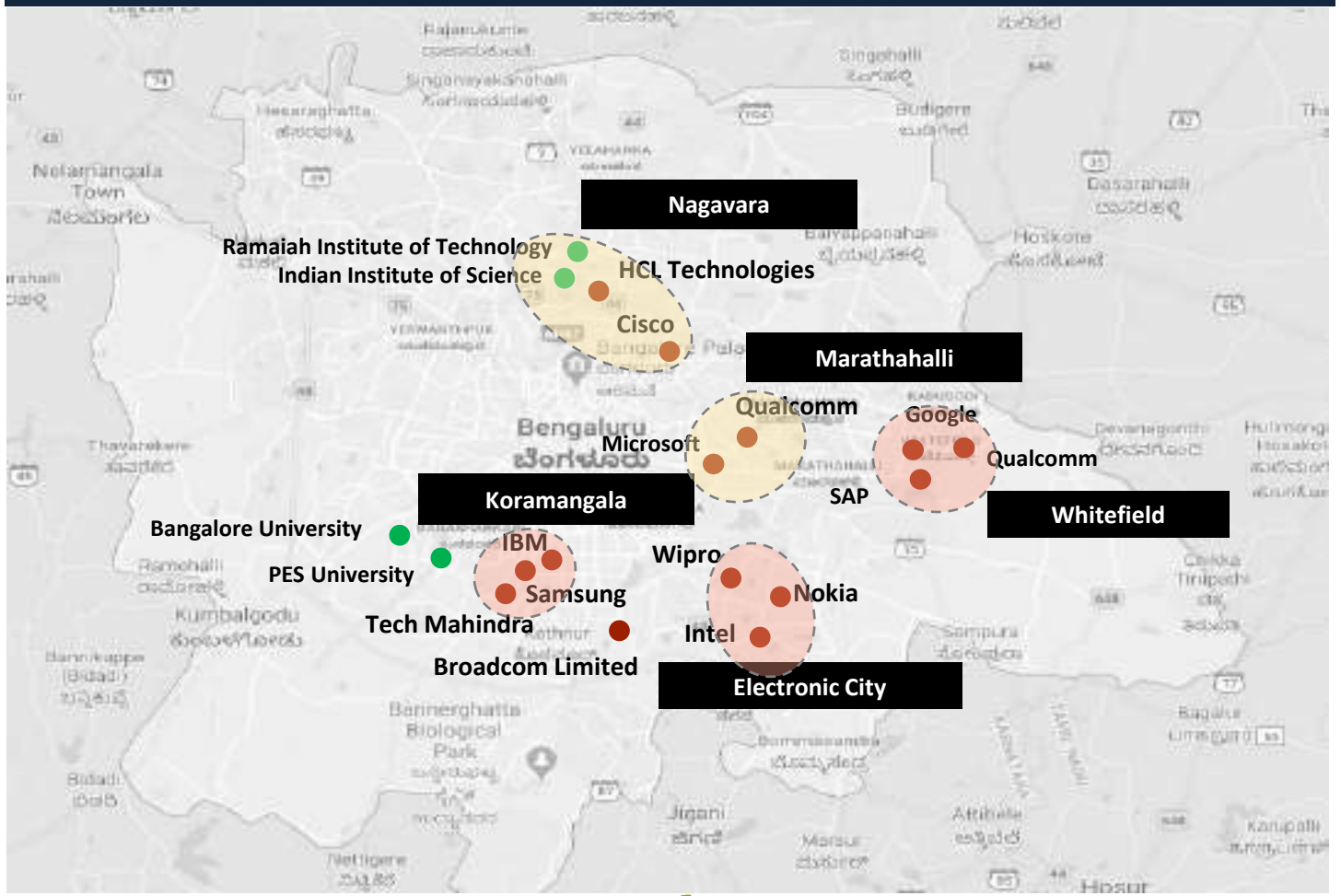


Female Tech graduates in Bangalore

~12,000

Bengaluru has well distributed Experience Split of Female Talent for cloud Engineer, with high density of Tech hubs, Major Industry Players and Top Universities

Greater Bengaluru Area, India



Note : DRAUP's proprietary talent module was used to analyse location insights, talent supply, talent growth of Bengaluru area

CONTENTS

This Section contains:
- Reskilling strategies to increase female representation in high demand job roles
- Reskilling case study

Reskilling to improve Gender diversity in tech roles: Reskilling is becoming an effective tool for organizations to train female talent in disrupted jobs in high demand New Age job roles

Reskilling can help provide a viable career path to female tech talent employed in disrupted jobs to in –demand and disruption proof Tech Jobs

Tech Job clusters with low demand, disruption prone, but high representation of Female talent

- IT Admin and Support (40% female in US)
- QA Testing (39% female in US)

Reskilling

Based on skills gap analysis, Reskilling can provide a new career path to certain job roles

In –demand and disruption proof Tech Job clusters with low representation of Female talent

- Information Security (20% female in US)
- Cloud Computing (17 % female in US)

Draup's Reskilling Methodology

1. Skill identification of high demand job roles
2. Skill gap analysis between the starting and desired role
3. Analysis of feasible transitions based on relevant Reskilling parameters
4. Suitable learning module selection to bridge the skill gaps

Source: DRAUP's analysis

Reskilling feasibility analysis for Cloud job roles: Reskilling is helping organizations in retaining female tech talent in disrupted job roles by providing them a feasible career path towards disruption-proof jobs with overlapping skills

Draup analyses 4 Million+ career paths and 50 Million+ digitally influenced roles to determine Reskilling Path and Feasibility

Disrupted Job families	Sample Job roles that can be Upskilled/Reskilled For Cloud Engineer	Technical Skills Overlap	Functional skills overlap	Overall Reskilling feasibility	Sample Cloud Computing Job Role
IT Admin and Support	IT Administrator				Cloud Engineer
	Tech Support Engineer				
	Database Administrator				
QA Testing	QA Engineer				
	Software/System Tester				
	Test Engineer				

High Medium Low

Note : DRAUP's proprietary talent module was used to analyse reskilling feasibility of job roles based on multiple metrics like skills overlap, experience etc

Reskilling Case study of 'IT Administrator': With extensive analysis of Skills gap, Reskilling can provide a smooth transition for disrupted female tech talent to underrepresented and in-demand job roles

draup

Sample Reskilling case study: *Based on skill gap analysis, a relevant learning module/course was selected to showcase how An* ***'IT Administrator'*** *can be reskilled to evolve into a high demand and underrepresented* ***'Cloud Engineer'*** *role*

IT Administrator

Existing skills

- Scripting languages (Bash, PowerShell)
- OS and Servers (Windows, LINUX, Mac)
- Multi-platform authentication/identification

Reskilling duration:
4 - 6 months (self-paced learning)

Course undertaken:
Python for Data Science and Cloud Computing by Udemy

Skills acquired with **Courses/Certification**

Programming Languages and Algorithms

- Python (Programming Language)

Cloud Computing Services

- Microsoft Azure
- AWS

Cloud Engineer

Required skills

- Azure and AWS stack
- Scripting languages (Bash, Python, PowerShell)
- Multi-platform authentication/identification
- OS and Servers (Windows, LINUX, Mac)

Existing skills | **Acquired skills**

Note: Draup performs complex assessment around various other critical Reskilling parameters between existing and desired roles to understand skill gap and match it with relevant learning modules

About Draup

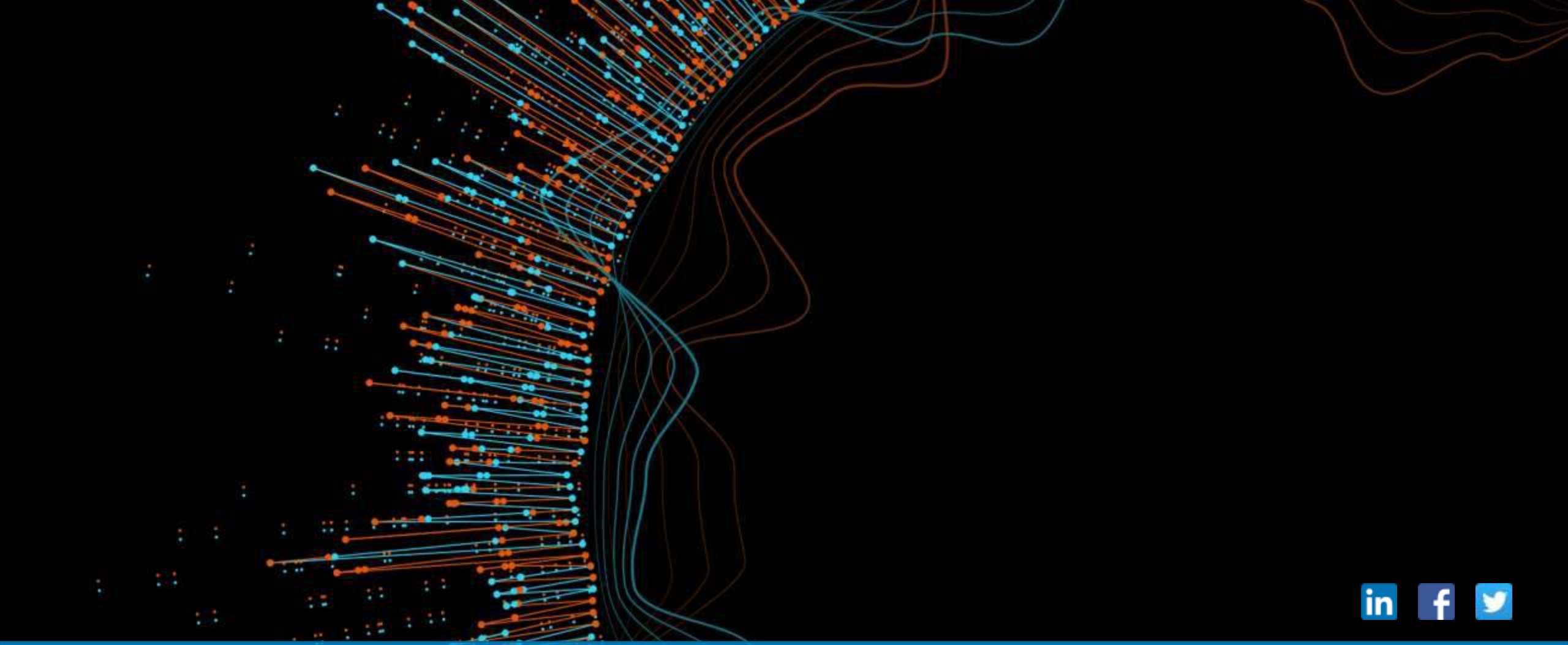
Draup Capabilities & Data Assets

EMPOWERS DECISION MAKING IN

- Recruitment
- Strategic Workforce Planning
- Reskilling
- Diversity & Inclusion
- Peer Intelligence
- Compensation & Benefits
- University Relations
- Mergers and Acquisitions

and diverse other use cases…

Draup highlights: Draup tracks insights of 4,500+ job roles across 2,500+ locations and analyses 50 Million+ digital & digitally influenced professionals to help HR leaders in their Talent Acquisition, Workforce planning, and Reskilling initiatives



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