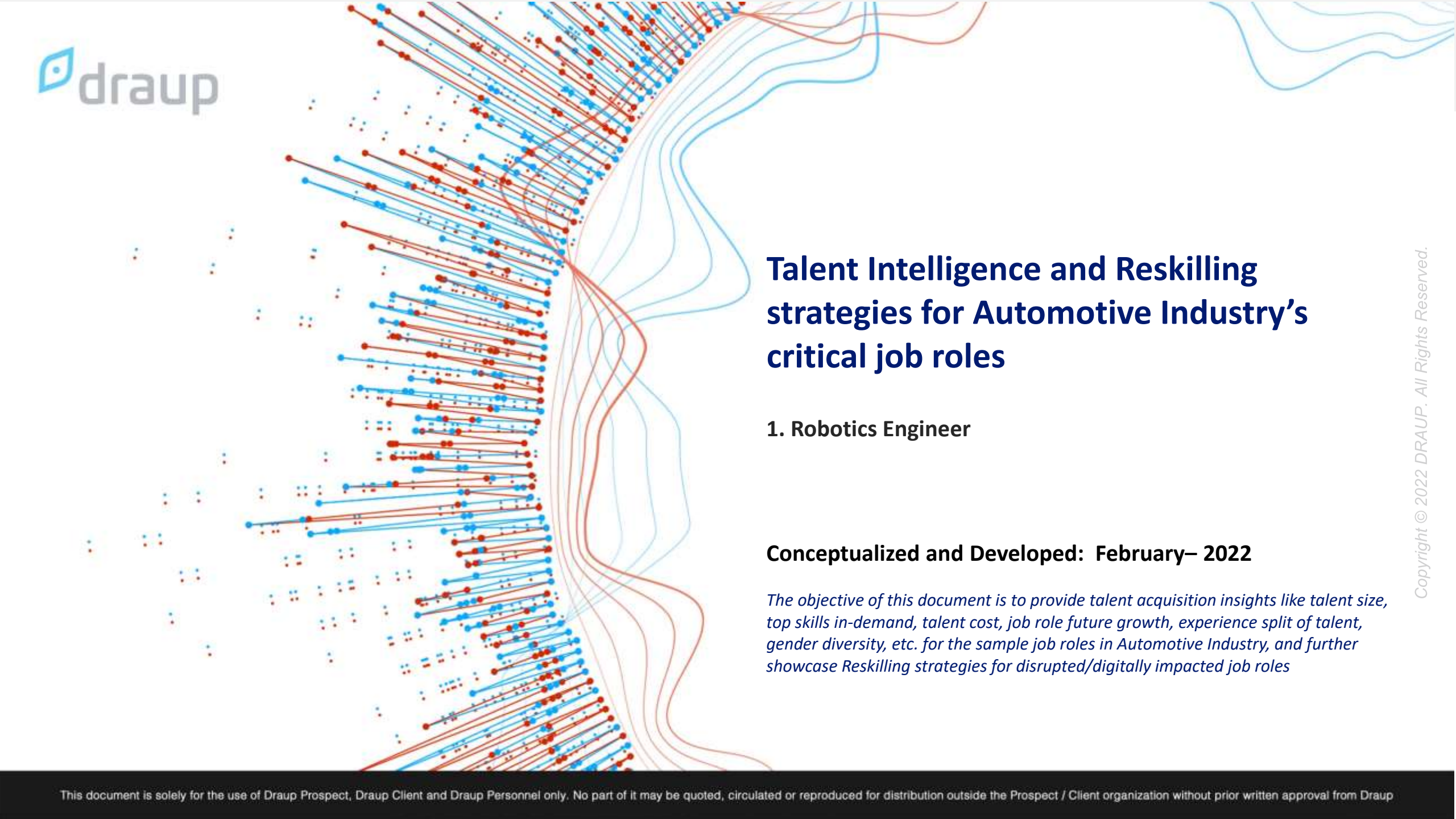


An abstract background graphic consisting of numerous thin, wavy lines in shades of blue and red, some with small dots at their ends, creating a sense of movement and data flow.

Talent Intelligence and Reskilling strategies for Automotive Industry's critical job roles

1. Robotics Engineer

Conceptualized and Developed: February– 2022

The objective of this document is to provide talent acquisition insights like talent size, top skills in-demand, talent cost, job role future growth, experience split of talent, gender diversity, etc. for the sample job roles in Automotive Industry, and further showcase Reskilling strategies for disrupted/digitally impacted job roles

Agenda

Pages

3-5

- Job role demand and location analysis across Automotive Industry

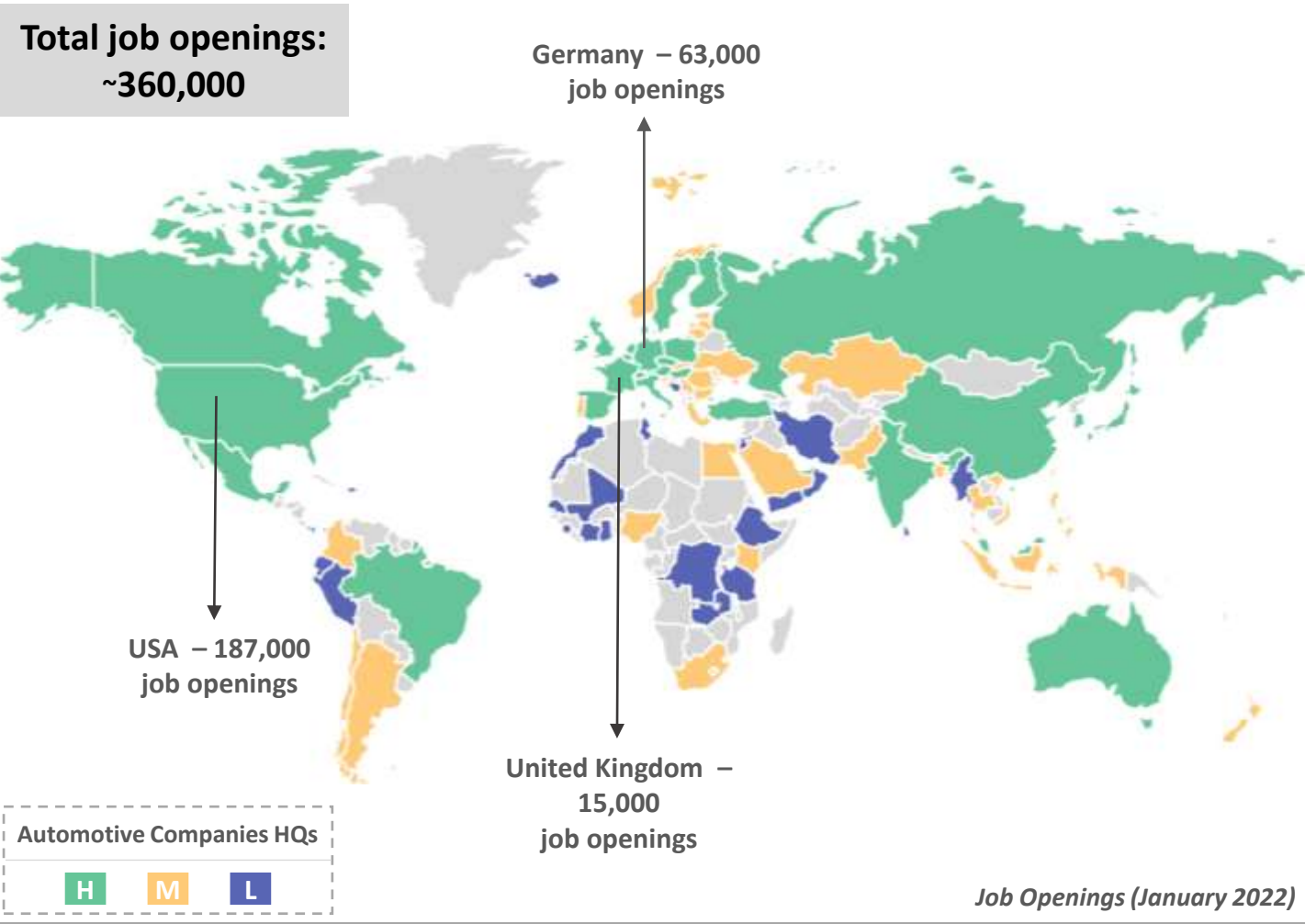
7-13

- Location & Talent Intelligence for 'Robotics Engineer'

15-18

- Reskilling approach to meet the Digital Skills Gap

Global Talent demand in Automotive Industry



Global key in-demand job roles in Automotive Industry

Financial Analyst	Project Manager	Manufacturing Engineer
DevOps Engineer	Cyber Security Analyst	RPA Developer
Data Engineer	Pricing Analyst	Assembly Technician
Scrum Master	Cloud Architect	Procurement Manager
Category Manager	Data Analyst	Business Analyst
Robotics Engineer	Program Manager	NLP Engineer
Full Stack Engineer	Product Manager	Design Engineer
Data Scientist	Product Owner	Account Manager
Application Developer	Machine Learning Engineer	Site Reliability Engineer

Note: Draup tracks the insights for 4,500+ job roles across Industries; Draup also tracks the insights related to Talent at company level for all the industries
Source: Respective career pages and job portals were used to find job openings, Draup platform

But, for acquisition of high demand job roles, Automotive companies are currently competing with their peers across global locations

High demand job roles	Job Growth (Last 1 month vs last 3 month)	Total global job postings in Automotive Industry (in last 12 months)
Robotics Engineer	↑ 17%	36,000
Full Stack Engineer	↑ 16%	20,500
Data Analyst	↑ 14%	40,000
Data Scientist	↑ 13%	23,000
Product Manager	↑ 13%	27,000
Pricing Analyst	↑ 12%	15,000
Program Manager	↑ 11%	54,000
Financial Analyst	↑ 10%	17,000



Draup has further analysed the above highlighted roles in details

Note: Draup tracks the insights for 4,500+ job roles across Industries; Draup also tracks the insights related to Talent at company level for all the industries
Source: Draup platform, Companies' career page



Job role overview – Robotics Engineer

Robotics Engineer ensures that machines operate safely, dependably, and with precision; identifies and implements modifications.

Key Workloads:

- ➔ Design, Build, configure, and test software systems to control the robotic systems
- ➔ Analyze and evaluate the prototypes of the robotic systems

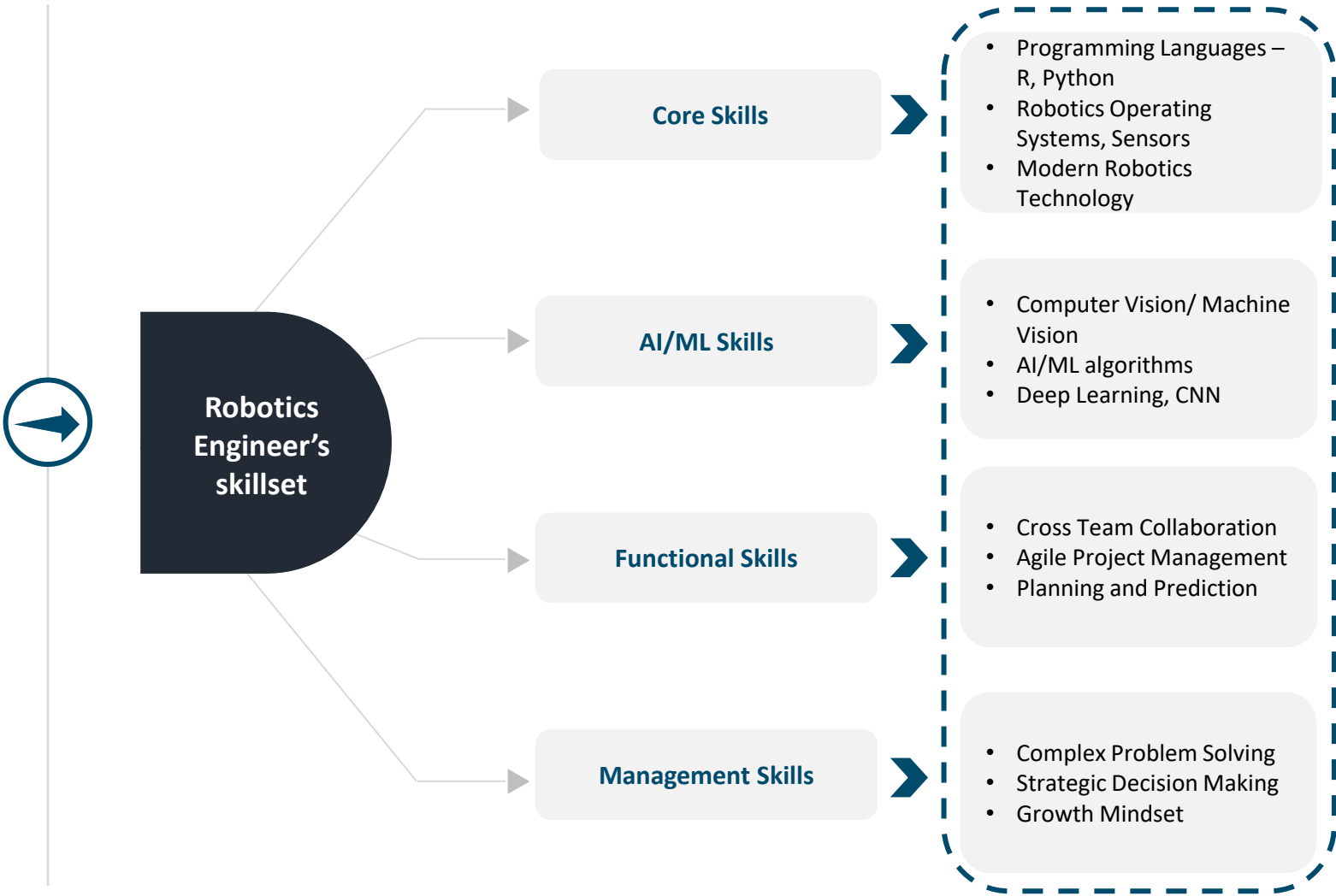
Qualification:

- ➔ Bachelor’s or Master’s Degree in Mechanical/ Robotics/Mechatronics related disciplines

Certifications:

- ➔ Certification in Robotics Technologies

Robotics Engineer key competencies



To avoid competition from peers and better understand the talent landscape for high demand job roles, Draup has leveraged its Talent Intelligence platform to provide Automotive Industry's HR leaders insights around 'Location Intelligence' and 'Reskilling' for sample job roles

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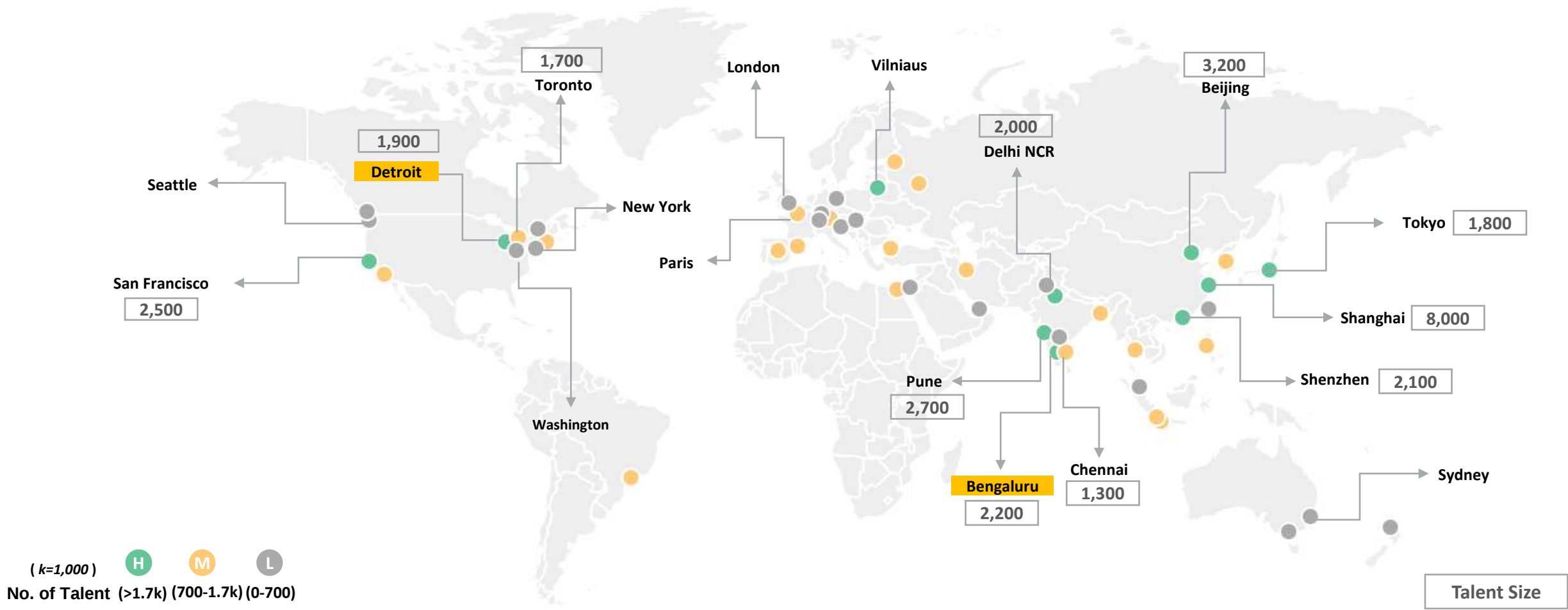
- **Location & Talent Intelligence for 'Robotics Engineer'**

15-18

- Reskilling approach to meet the Digital Skills Gap

Global hotspot overview – Robotics Engineer: Shanghai, Beijing, Pune, San Francisco, and Bengaluru are the top 5 locations with highest talent availability

Global hotspots for ‘Robotics Engineer’ Talent



Based on the job demand of all locations, Draup has provided deep dive of a sample locations (Detroit, and Bengaluru)

Source: All the above insights are tracked in real time on the Draup platform, Draup’s proprietary Talent module tracks holistic insights related to Talent Acquisition, Workforce planning, Learning & Development (Reskilling/Upskilling initiatives)

Talent Acquisition insights for ‘Robotics Engineer’ role in ‘Detroit’

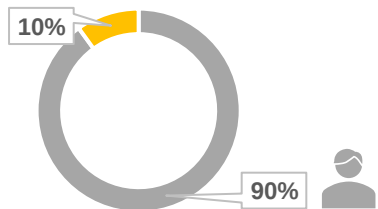


Talent size



USD 106 K

Median Talent cost in United States



Gender Diversity



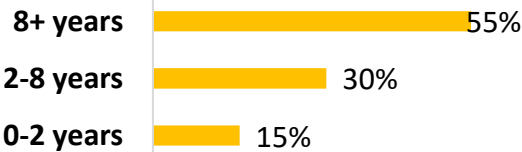
1.30%

Projected Talent size growth rate for 3 years (CAGR)



USD 93,800

Talent cost



Talent Size Breakup by Seniority

Top Employers



Top Universities offering relevant Robotics Courses



Top skills:

◆ Niche

Size of talent with specific skill

H

M

L

◆ Robotics	◆ Robot Operating Systems	Sensors	CAD
Programming Languages	Algorithms	Linux	AI/ML
◆ Fanuc Software	◆ Embedded Systems	Control Systems Design	Debugging
◆ SLAM	◆ Motion Control/Planning	Solid works	Path Planning

Digital Tech Stack:

Talent Size in Tech Stack

H

M

L

AutoCAD	Power BI	Microsoft PowerPoint
AWS	Microsoft Excel	Map box
Cmake	OpenCV	CATIA
Solid Works	Eplan	CATIA

Draup has provided sample Robotics Engineer Talent profiles based on various hiring parameters

Machine/
Computer
Vision skill
based Talent



Zheng Dong

✉ [LinkedIn Profile](#)



Michigan

Current :  Applications Engineer at Mathworks



Rob Hoff

✉ [LinkedIn Profile](#)



Michigan

Current :  Robotics Engineer at R&E



Scott Chapoton

✉ [LinkedIn Profile](#)



Detroit

Current :  Robotic Engineer at Comau



Brian Musser

✉ [LinkedIn Profile](#)



Michigan

Current :  Machine Vision Engineer at General Motors



Kwan C Shim

✉ [LinkedIn Profile](#)



Michigan

Current :  Robotics and Machine Vision Engineer at ROPIX



Suraj Goyal

✉ [LinkedIn Profile](#)



Michigan

Current :  Computer Vision Engineer at Continental



Soham Patkar

✉ [LinkedIn Profile](#)



Detroit

Current :  Robotics Engineer @ SkySpecs



Raksha Rajashekar

✉ [LinkedIn Profile](#)



Detroit

Current :  Robotics Engineer at May Mobility



Steven Essenberg

✉ [LinkedIn Profile](#)



Detroit

Current :  Robotics Engineer at Applied Manufacturing



Pallav Kothari

✉ [LinkedIn Profile](#)



Detroit

Current :  Robotics Project Engineer at Amazon



Colleen Jaszczolt

✉ [LinkedIn Profile](#)



Detroit

Current :  Robotics Engineer at Comau



Christian Stevenson

✉ [LinkedIn Profile](#)



Detroit

Current :  Robotics Engineer at FANUC

Detroit based
Talent

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Sample Profiles overview of 'Robotics Engineer' talent in 'United States' based on overall years of experience, and Qualification



Draup has provided sample Robotics Engineer Talent profiles based on various hiring parameters

Overall
4+ Years
Experience

Scott Bohm [LinkedIn Profile](#) Michigan
Current : Robotics Programmer/Engineer

Humberto Rodriguez [LinkedIn Profile](#) Michigan
Current : Robotics Engineer at International Robot Support

Jerry Bowman [LinkedIn Profile](#) Michigan
Current : Sr. Robotics Engineer at General Motors

Rich Ingweiller [LinkedIn Profile](#) Michigan
Current : Robotics Engineer at General Motors

Abhishek [LinkedIn Profile](#) Michigan
Current : Senior Robotics Engineer at May Mobility

Paul Fedirko [LinkedIn Profile](#) Michigan
Current : Robotics Engineer at Classic Design

Shirshak Adhikari [LinkedIn Profile](#) Michigan
Current : Robotics Project Engineer | Amazon

Pritam Pahade [LinkedIn Profile](#) Michigan
Current : Software Engineer (Robotics & Controls) at Dürr Systems

Bo Cui [LinkedIn Profile](#) Michigan
Current : Senior Application Engineer at Kawasaki Robotics

Sanju Kumar [LinkedIn Profile](#) Michigan
Current : Robotics Engineer at DiFACTO

Nathan Rapp [LinkedIn Profile](#) Michigan
Current : Robotics Engineer at ABB

JATIN MAYEKAR [LinkedIn Profile](#) Michigan
Current : Robotics Applications Engineer at ABB

Master's OR
Ph.D.
Qualification
Talent

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Talent Acquisition insights for ‘Robotics Engineer’ role in ‘Bengaluru’



2,200

Talent size

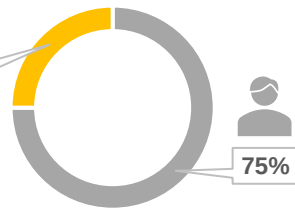


USD 4 K

Median Talent cost in India



25%



75%

Gender Diversity



1.20%

Projected Talent size growth rate for 3 years (CAGR)



USD 4,500

Talent cost

8+ years

20%

2-8 years

58%

0-2 years

22%

Talent Size Breakup by Seniority

Top Employers



Top Universities offering relevant Robotics Courses



Top skills:

◆ Niche

Size of talent with specific skill

H

M

L

◆ Robotics	◆ Robot Operating Systems	Sensors	CAD
Programming Languages	Algorithms	Linux	AI/ML
◆ Fanuc Software	◆ Embedded Systems	Control Systems Design	Debugging
◆ SLAM	◆ Motion Control/Planning	Solid works	Path Planning

Digital Tech Stack:

Talent Size in Tech Stack

H

M

L

AutoCAD	Power BI	Microsoft PowerPoint
AWS	Microsoft Excel	Mapbox
Cmake	OpenCV	CATIA
Solid Works	Eplan	CATIA

Draup has provided sample Robotics Engineer Talent profiles based on various hiring parameters

Machine/
Computer
Vision skill
based Talent



Krishna Prasad

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current :  Robotics and Computer vision engineer at Team VAUV



Varun Ittigi

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current :  AI – Robotics Engineer at Inno



Rahul Madhogarhia

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current :  Robotics Engineer at FLUX



Sharath M G

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current :  Robotics at Systemantics India Pvt. Ltd



Sriram Chellasamy

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current :  Robotics Engineer at DiFACTO Robotics



Ankit Harne

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current :  ROBOTICS ENGINEER at Airbus



Shehzaman

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current :  AI Engineer, Robotics Research Engineer at Siemens



Varun Ganjigunte

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current :  ML Engineer- CV Robotics



Sanghamitra

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current :  Project Engineer CV-ML at NS



Shruthi Rajagopalan

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current :  Robotics Engineer at TATA



Kush Prasad

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current :  Lead Robotics Engineer at AUTONXT



Aditya Srinivas

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current :  Robotics Engineer

Bengaluru
based Talent

Sample Profiles overview of 'Robotics Engineer' talent in 'India' based on overall years of experience, and Qualification



Draup has provided sample Robotics Engineer Talent profiles based on various hiring parameters

Overall
4+ Years
Experience



Edwin Pidiyath [LinkedIn Profile](#) Bengaluru
Current : Engineer (Automation and Robotics) at Actemium



Ayyapillai S [LinkedIn Profile](#) Bengaluru
Current : Robotics Engineer at DiFACTO



Don James [LinkedIn Profile](#) Bengaluru
Current : Senior Robotics engineer at Hirotec India



Saravana Kannan [LinkedIn Profile](#) Bengaluru
Current : Robotics Engineer at DiFACTO



Jignesh Khakhriya [LinkedIn Profile](#) Bengaluru
Current : Senior Robotics Software Engineer COE at Shell



Apurv Saha [LinkedIn Profile](#) Bengaluru
Current : Robotics Engineer at RPYUTA



Vijaykumar [LinkedIn Profile](#) Pune
Current : Senior Robotics Engineer at Gestamp



Kiran Gopinath [LinkedIn Profile](#) Bengaluru
Current : Robotics Engineer at Canares Engineering Company



Sukumar K. [LinkedIn Profile](#) Bengaluru
Current : Software Engineer | Robotics at Honeywell



Badal Kumar [LinkedIn Profile](#) West Bengal
Current : Robotics Software Engineer



KRISHNAPRIYA T S [LinkedIn Profile](#) Bengaluru
Current : Junior Robotics Engineer Trainee at Inker Robotics



Raj Mohan [LinkedIn Profile](#) Bengaluru
Current : Mobile Robotics

Master's OR
Ph.D.
Qualification
Talent

Note: Draup's internal modules such as 'Draup Talent Module, Draup Rolodex, Draup Universe, & External Sources' was used to analyze talent profiles based on past and current designation, location and skills. Draup has a corpus of 155 Million+ real time job professionals who are tagged based on various parameters such as Promotion Odds, Hiring propensity, Relocation, etc. , Draup's Rolodex feature helps Enterprises in targeted hiring for 4,500+ job roles across 2,500 global MSAs

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- **Reskilling approach to meet the Digital Skills Gap**

Key reasons for Reskilling compared to Hiring

To provide viable career path for disrupted roles

1.37
Million

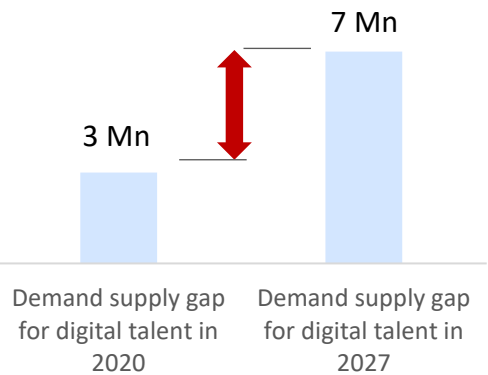
jobs¹ projected to be displaced fully out of their roles in the next decade

Cost savings

20-50%

Cost savings² per employee with Reskilling compared to external recruitment

To address the huge digital supply demand gap



2.3x
Global deficit³ of digital talent in 2027 compared to 2020

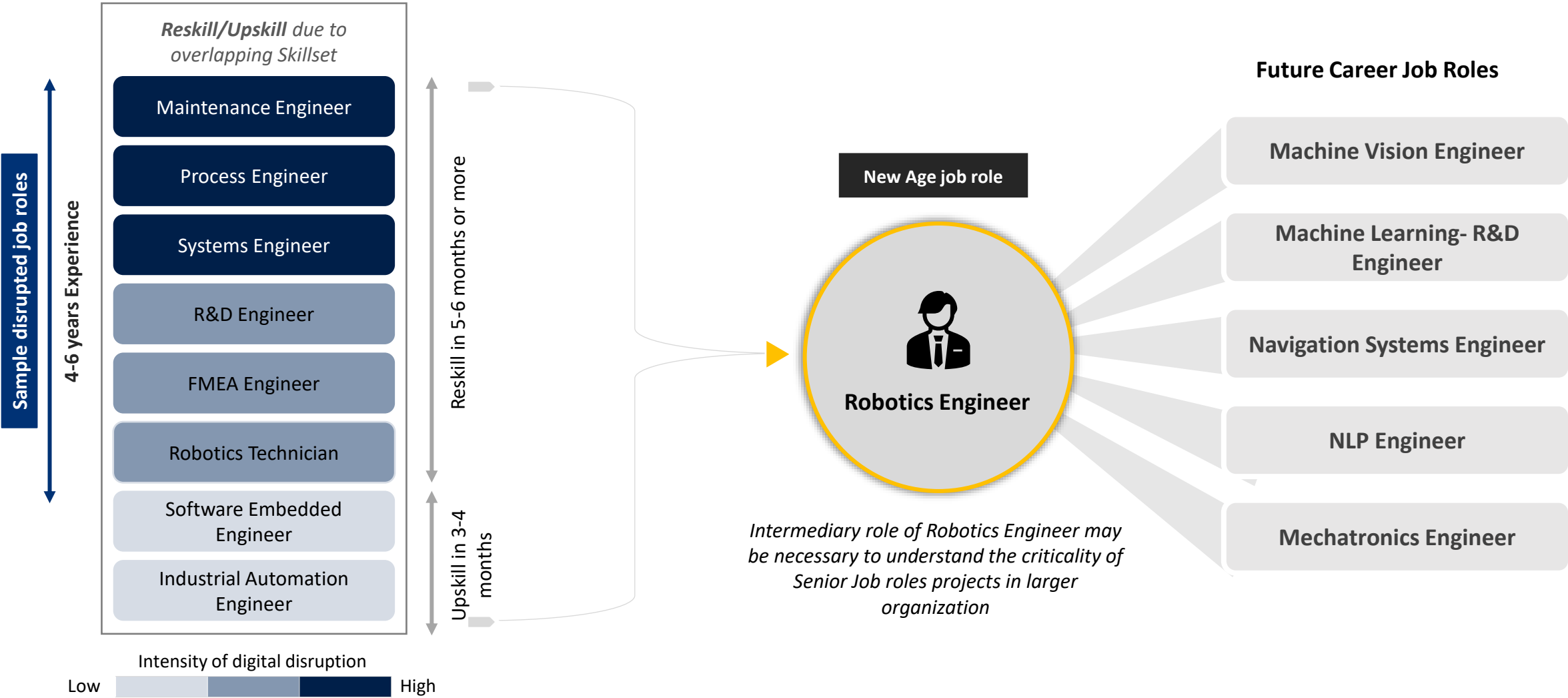
To increase Employee satisfaction

86%

Employees⁴ around the Globe demand New Skills Training from their Employers

To meet the unmet demand for New Age job roles by Reskilling/Upskilling the existing traditional or adjacent talent pool to provide a viable career path

Sample disrupted job roles can be reskilled to in-demand 'Robotics Engineer' profession and progress to various lucrative senior roles over time



Reskilling Propensity Analysis: As a long-term strategy, Automotive firms should reskill/upskill disruption-prone workforce for in-demand role like Robotics Engineer



Sample Reskilling Propensity Index (RPI) of existing talent in the firms who can transform into New Age job roles

Job roles that can be Upskilled/Reskilled (Experience required: 4+ years)	Sample Parameters ¹ to analyse different skill gaps and career transition trends					Desired role
	Technical Proficiency	Functional Proficiency	Specific Soft Skills Overlap	Observed Career Transitions	Compensation Gap	
	Programming, ROS, Robotics – AI/ML	Analytical, Market Research	Leaderships & People skills	Transitioning into desired job role		
Industrial Automation Engineer						Robotics Engineer
Robotics Technician						
Process Engineer						
Maintenance Engineer						

Favourability Score in Individual Parameter

High

Medium

Low

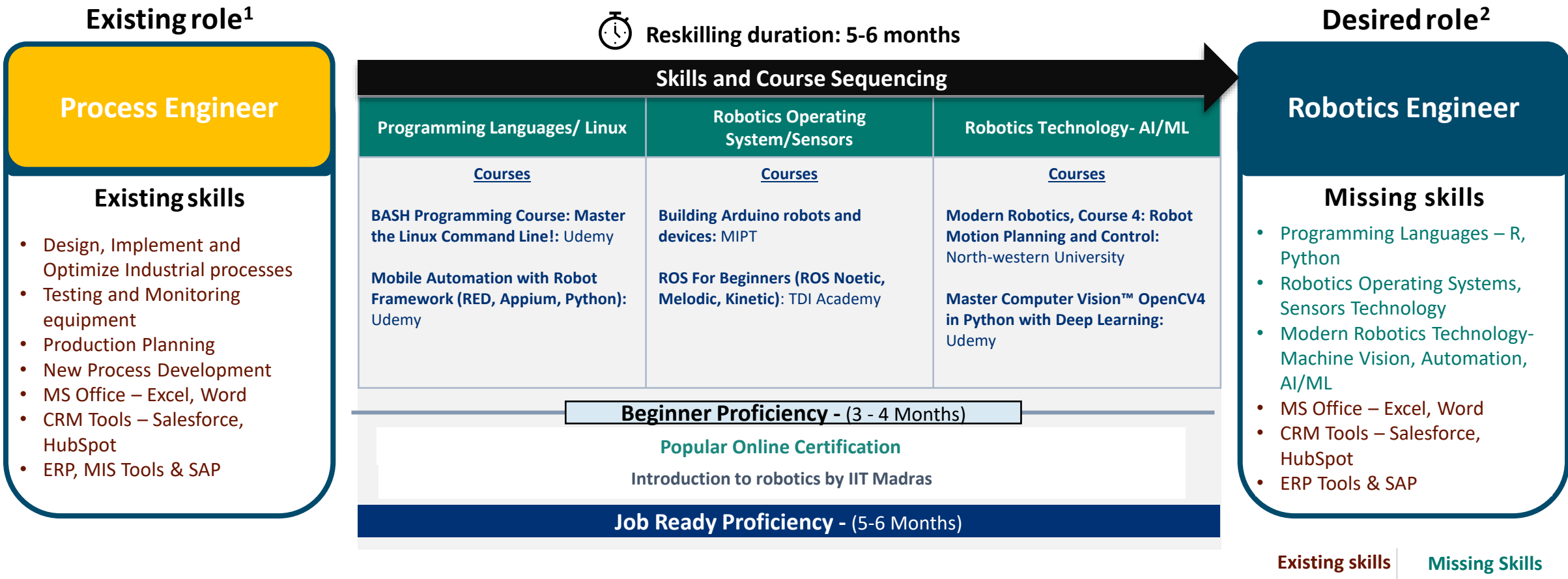
1. Several other Reskilling parameters are considered in detailed analysis

2. **Above job roles arranged using RPI or Reskilling Propensity Index,** Draup’s Proprietary scoring index methodology for Reskilling which is based on detailed analysis of relevant parameters. RPI ranges from 1-10 score, where >5 score job roles are reskilled due to less overlapping skillsets, and >6.5 are upskilled due to a few overlapping skillset.

Notes: Above analysis is done using Draup’s ‘Reskilling Simulator’ and ‘Reskilling Navigator’ features. Existing Skills and Core skill gaps for Reskilling propensity have been identified for 4,500+ job roles through the analysis of relevant JDs from a dataset of over 150 Million+ Job Descriptions.

Reskilling framework: A traditional ‘Process Engineer’ can step up to a ‘Robotics Engineer’ role with Supply Chain Analytics, and Demand Planning skillsets to solve unique business problems of Automotive Industry

Sample Reskilling case study: A traditional ‘Process Engineer’ transitioning into a high demand ‘Robotics Engineer’ role



1. Process Engineer considered here should have 4+ years experience with high overlapping skill sets of Robotics Engineer
 2. During transition time (4-6 months), Reskilled Process Engineer can be utilised to cater basic level Robotics Engineer workloads and can be trained simultaneously inhouse to gain advanced expertise

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 uses Machine Learning models to perform analysis provided in the report, Global HR leaders of leading Automotive firms are leveraging Draup for taking Data-driven Talent decisions



Draup Capabilities & Data Assets



EMPOWERS DECISION MAKING IN

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

and diverse other use cases...

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