

# Workforce Planning Model

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**PURPOSE** Due to the pandemic, we have lived in times of uncertainty in the last two years. Governments across the world engaged in pandemic stimulus programs. The combination of weak supply chains, inflation, and expected geopolitical uncertainty has led to some difficult questions in the minds of Global Leaders. ***Do we continue building and hiring the next generation's skills, or do we slow down?*** This **dilemma** is the central dilemma. An effective Workforce Planning Model can help organizations navigate the challenging environment.

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## Introduction:

A **global workforce execution strategy** will have a mix of **people purposes across the globe** for the same skills-family and functions. Ambitions across locations will differ as the generations serving will be very different. This challenge requires a clear **Investment of ideas** in developing a good **workforce forecasting** model. The most influential leader **Ruth Porat of Alphabet** said this. "***The most visible reflection of our focus on long-term performance is our continued investment in talent and compute capacity across the company.*** Many companies often need some nonlinear innovation to survive. Starbucks ***Deep Brew is an idea designed by a few*** Starbucks employees who dreamt that it went on to almost save the company. Today, it is not only a customer-facing app but also a sophisticated supply chain platform. Some innovations are far-fetching as well. **In 1989, an Apple Employee and Intellectual Visionary Marc Porat** developed a sketch of the pocket crystal in his big red notebook. On this, he wrote, "it must offer the kind of a personal satisfaction that a fine piece of jewellery brings" This pocket crystal sketch was the origin of touchscreen mobile computing (**Adapted from the book Build: An Unorthodox Guide to Making Things Worth Making**).

**Workforce Planning cannot be a mere function of Supply-Demand gap modeling. Workforce Planning with proper inputs is a vital process for hiring and developing the right set of skills for fostering growth and innovation in the enterprise**

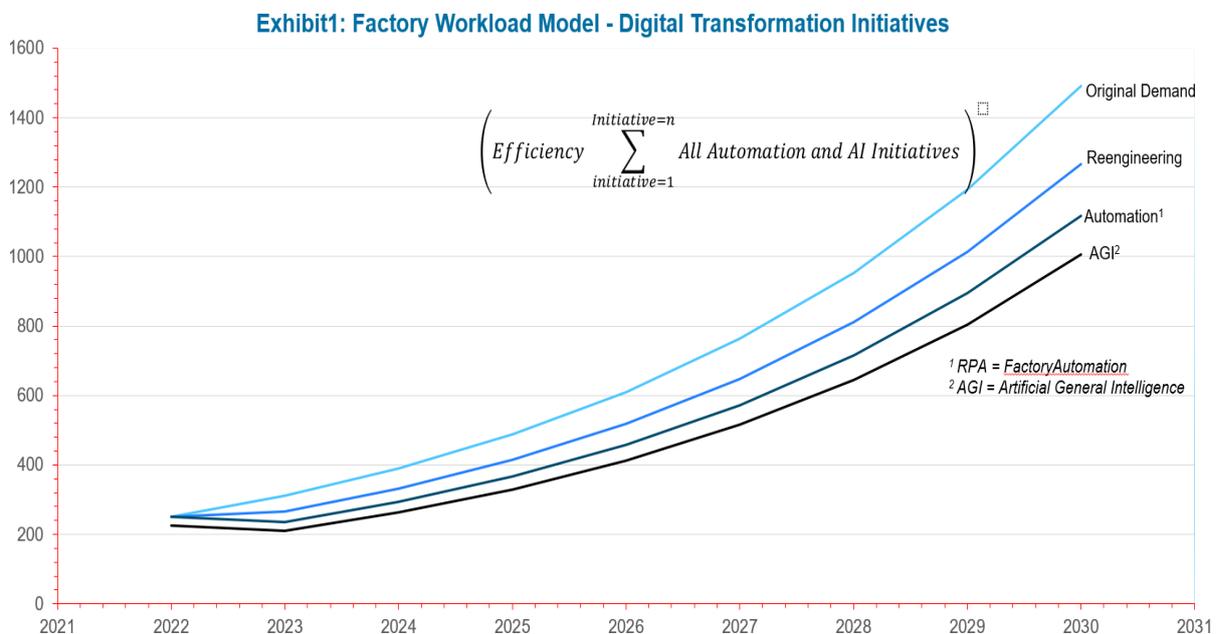
## Draup Approach

Draup proposes building a custom workforce planning model that will help give the **scenario modeling powers** required in this analysis. Draup will consider several variables across three major categories

- Factors impacting the Demand Curve
- Factors impacting the Supply Curve
- Business Simulation

**Factors Impacting the Demand Curve:** Draup will help Workforce Planners develop demand profile graphs at each factory level. Several digital transformation initiatives must be considered, and efficiency formulas must be considered against those initiatives. The following are the variables under this category

- Expected Headcount Growth rates
- Expected Efficiency rates due to Automation
- Expected Efficiency rates due to Process Improvement and other Reengineering efforts



The model is developed to showcase Factoryworkloads and the corresponding efficiency opportunities. The expected savings percentage is triangulated based on available case studies.

**Factors Impacting the Supply Curve:** Most Draup effort will be on the supply model parameters. The following are the variables/models to consider under this category

1. Current Headcount Assumptions
2. Attrition Impact
3. Supply/Demand Gap (Post Digital Improvement Assumptions from Demand Curve)
4. Expected Probabilistic Hiring Model by Channels
5. Geopolitical Risk Model by Location
6. Macro-Economic Risk Factors by Location
7. Wage Inflation Models by location
8. Competitor Intensity (Hiring Difficulty models)

A predictive model of expected attrition will allow us to plan for the supply ramp-up requirements. A statistical control chart around attrition will help us model the supply-demand gap

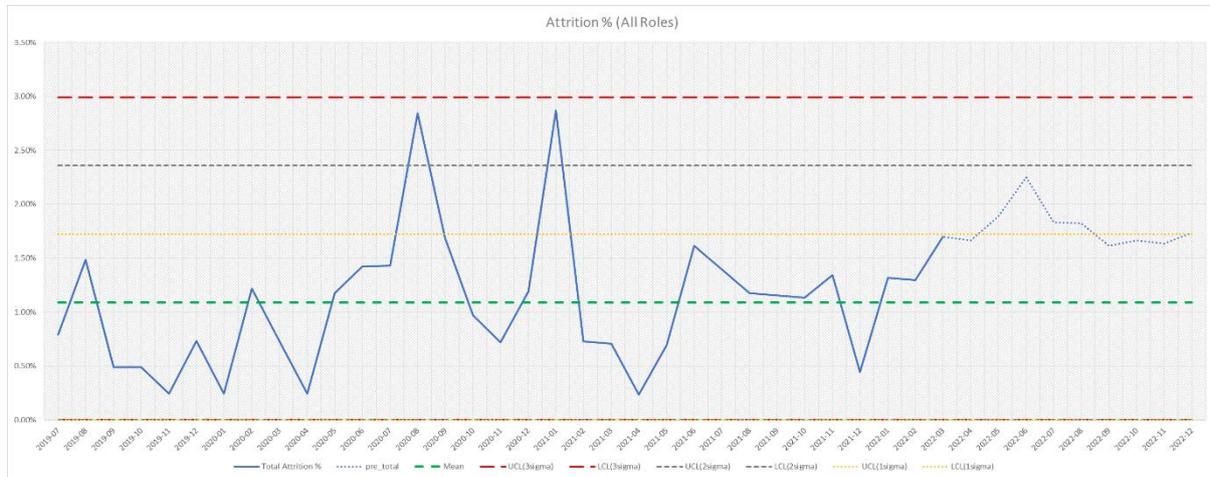


Exhibit2 – Attrition Patterns Control Chart

Through careful considerations of internal movement and reskilling assumptions, the model will be able to produce net hiring requirements

External Hiring Requirements – 2023 Q1															
Locations	Manufacturing				Quality and Reliability		Mechanical Engineer	Electrical Engineer		Product Management	Supply Chain	Automation	IoT	AR/VR	Quantum Computing
	Level1	Level2	Level3	Level4	Level2	Level3	Level4	Level1	Level2	Level1	Blockchain & Web 3.0	RPA	IoT	AR/VR	Quantum Computing
<b>Total</b>	<b>26,000</b>	<b>21,500</b>	<b>7,500</b>	<b>8,000</b>	<b>20,000</b>	<b>11,000</b>	<b>7,500</b>	<b>7,000</b>	<b>1,800</b>	<b>16,000</b>	<b>2,300</b>	<b>5,500</b>	<b>7,000</b>	<b>14,500</b>	<b>225</b>
Ohio	500	400	300	250	300	250	150	200	200	190	220	220	230	240	250
Arizona	400	400	150	25	230	170	150	200	30	140	210	210	230	240	<50
Israel	100	90	60	60	80	70	65	55	65	55	65	75	70	70	<50
Ireland	90	86	88	87	88	77	88	67	67	57	57	65	67	68	<50
Germany	100	100	100	95	75	65	65	67	<50	55	40	55	55	65	<50
Malaysia	50	50	20	10	40	20	20	20	<50	30	30	100	30	40	<50
Portland	25	50	20	50	20	30	10	10	<50	20	<50	<50	10	50	<50

Exhibit3 – Net Hiring Model – Scenario1 with Reskilling Assumptions

Targets can be set across various planned hiring channels, and factory level metrics can be identified

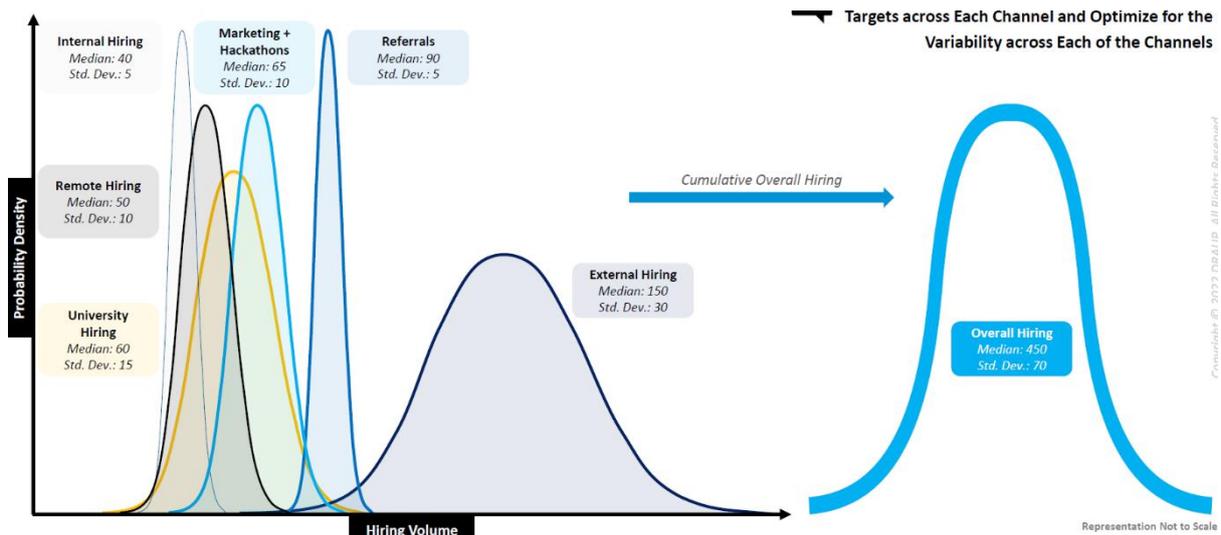


Exhibit4 – Hiring Channel Models

### Business Simulation:

In 2010, **World Bank** pioneered a unique approach called **EVOKE**. World Bank was interested in studying what the bank could face in a decade from 2010. Over 20,000 players (input providers) were chosen, and various questions were raised about the pandemic, weather changes, and several other crises. Some aspects of how citizens may behave during a pandemic were correctly modeled by EVOKE almost ten years back. This simulation is not algorithmic but a rich exercise driven by interviews and game theory

It will be beneficial for Workforce Planners **to conduct similar simulation exercises** with several leaders in the business. Specific aspects of discussions will be including the following questions (not exhaustive, a sample is given to get your thoughts organized)

- What projects do the leaders think will stand the test of time and become the company's long-term revenue generators?
- What digital initiatives do they plan to continue and scale?
- What skills should be rapidly scaled?
- What is their viewpoint on expanding in different geographies (within a state, country across the country)
- What is their belief in remote work?
- What type of questions do investors ask them about talent in board rooms?
- What skill gaps do you see in new hires?
- Do they see any opportunities to target specific competitors?
- Who are the mid-level leaders in peer companies they would like to target and onboard?

We envision a survey-based simulation that can collect data from all the leaders in a digitally seamless manner

Depending upon the output from the simulation, you can consider several factors for scenario modeling. Such a modeler can be customized for various scenarios. (Attrition, Diversity, Remote First, and so on)

Here is a **sample model output showcasing the FTE ratios**. A simple FTE ratio can be developed for any skills family. (i.e., what sort of cost advantage do I get across key locations compared to my existing base pay/total pay trends.)

Parameters	Employed Talent	Annual Growth Rate	95 <sup>th</sup> Base Pay	Hiring Difficulty	University Supply	Women Diversity	Attrition	English Proficiency
Weightage	30%	10%	15%	10%	10%	10%	10%	5%

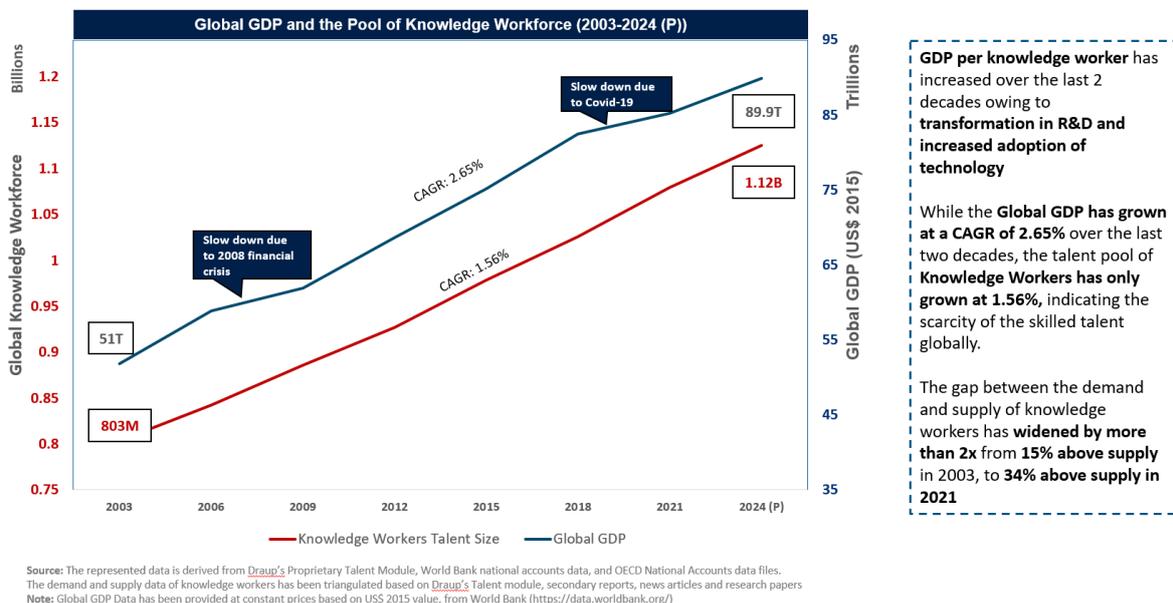
PARAMETERS	OVERALL CAPABILITY RATING	EMPLOYED TALENT		ANNUAL TALENT GROWTH (%YoY)		95 <sup>th</sup> % BASE PAY (in USD)		FTE COST RATIO WRT US (\$171,000)	HIRING DIFFICULTY INDEX (0-10)		ANNUAL SW UNIVERSITY SUPPLY		DIVERSITY (% WOMEN WOKRFORCE)		ATTRITION		ENGLISH PROFICIENCY	
		Talent	Rating	Growth Rate	Rating	95 <sup>th</sup> Percentile	Rating		HDI	Rating	Graduates	Rating	Diversity	Rating	Attrition	Rating	English Proficiency	Rating
Atlanta	7.0	9,500	8.0	13.0%	8.0	125,800	8.0	1.4	6.5	6.0	18000	8.2	19.5%	9.0	16.0%	8.0	98.8%	9.0
TORONTO	6.8	6,200	7.0	12.0%	8.0	117,000	5.0	1.5	7.0	5.0	28000	7.6	19%	7.0	20.0%	7.0	99.2%	9.0
LONDON	6.4	15,500	8.0	9.0%	6.0	149,000	4.0	1.1	8.0	4.0	35000	8.2	20%	7.0	22.0%	5.0	97.9%	8.0
PARIS	6.4	5,400	7.0	10.4%	7.0	95,000	7.0	1.8	8.0	4.0	14000	6.0	21%	7.0	20.0%	7.0	38.8%	3.2
MUNICH	6.3	5,400	7.0	11.0%	7.0	106,000	6.0	1.6	7.5	5.0	6000	4.0	23%	8.0	21.0%	6.0	66.3%	6.5
STOCKHOLM	6.2	5,200	6.0	11.6%	8.0	85,000	7.0	2.0	6.5	6.0	1700	2.0	21%	7.0	20.0%	7.0	75.3%	7.0
BERLIN	6.1	6,500	7.0	8.4%	6.0	110,500	6.0	1.5	8.0	4.0	6000	4.0	21%	7.0	21.0%	6.0	74.5%	7.0
AMSTERDAM	6.0	3,800	5.0	11.0%	7.0	90,000	7.0	1.9	5.5	7.0	5500	4.0	18%	6.0	20.0%	7.0	84.4%	7.0
MADRID	6.0	5,000	6.0	7.9%	5.0	78,500	7.0	2.2	6.5	6.0	13500	6.0	15%	5.0	19.0%	8.0	30.8%	3.0
BUCHAREST	6.0	3,400	4.0	10.0%	6.0	39,000	8.0	4.4	5.5	6.0	5300	4.0	31%	9.0	19.8%	7.0	85.5%	7.0
ROME	6.0	3,050	4.0	10.2%	7.0	75,600	8.0	2.3	5.5	7.0	4000	3.0	30%	9.0	19.0%	8.0	26.7%	3.0
WARSAW	5.9	3,600	5.0	9.0%	6.0	66,000	8.0	2.6	8.0	4.0	10000	5.0	18%	6.0	18.0%	9.0	39.5%	3.5
BARCELONA	5.8	4,500	6.0	7.3%	5.0	78,000	7.0	2.2	6.5	6.0	6000	4.0	17%	5.0	19.0%	8.0	29.4%	3.0
SAO PAULO	5.8	5,200	6.0	6.3%	4.0	35,000	9.0	4.9	7.0	5.0	20000	7.0	13%	4.0	27.0%	4.0	44.8%	4.0
BUDAPEST	5.8	2,700	4.0	6.5%	5.0	44,000	8.0	3.9	4.0	9.0	1300	2.0	16%	5.0	19.0%	8.0	98.2%	9.0
MEXICO CITY	5.5	3,500	5.0	9.5%	6.0	28,500	9.0	6.0	5.0	8.0	2600	2.0	14%	5.0	25.0%	4.0	26.9%	3.0
PRAGUE	5.4	2,650	3.0	8.4%	6.0	59,800	8.0	2.9	5.0	7.0	1600	2.0	18%	6.0	18.0%	9.0	64.9%	5.0
DUBLIN	5.2	3,200	4.0	8.5%	6.0	102,500	6.0	1.7	7.5	5.0	4000	3.0	24%	8.0	22.0%	5.0	91.4%	8.0

Note: DRAUP's proprietary talent module & Draup's Cost Simulation Module was used to analyse talent attributes and 95<sup>th</sup> percentile base pay.

Increasing Location Favourability

Source: Draup

A long-range forecast for each job family is also critical (Occupation Level, Job Family Level, and Skill Level). Here is an example of such a longer-term forecast. Here the knowledge worker growth is compared against GDP growth. Such comparisons with macro will help HR leaders justify **the velocity of the growth** that is planned



## **Conclusion**

A well-designed workforce planning model will provide the required scenario planning abilities (even if it involves time to develop the model).