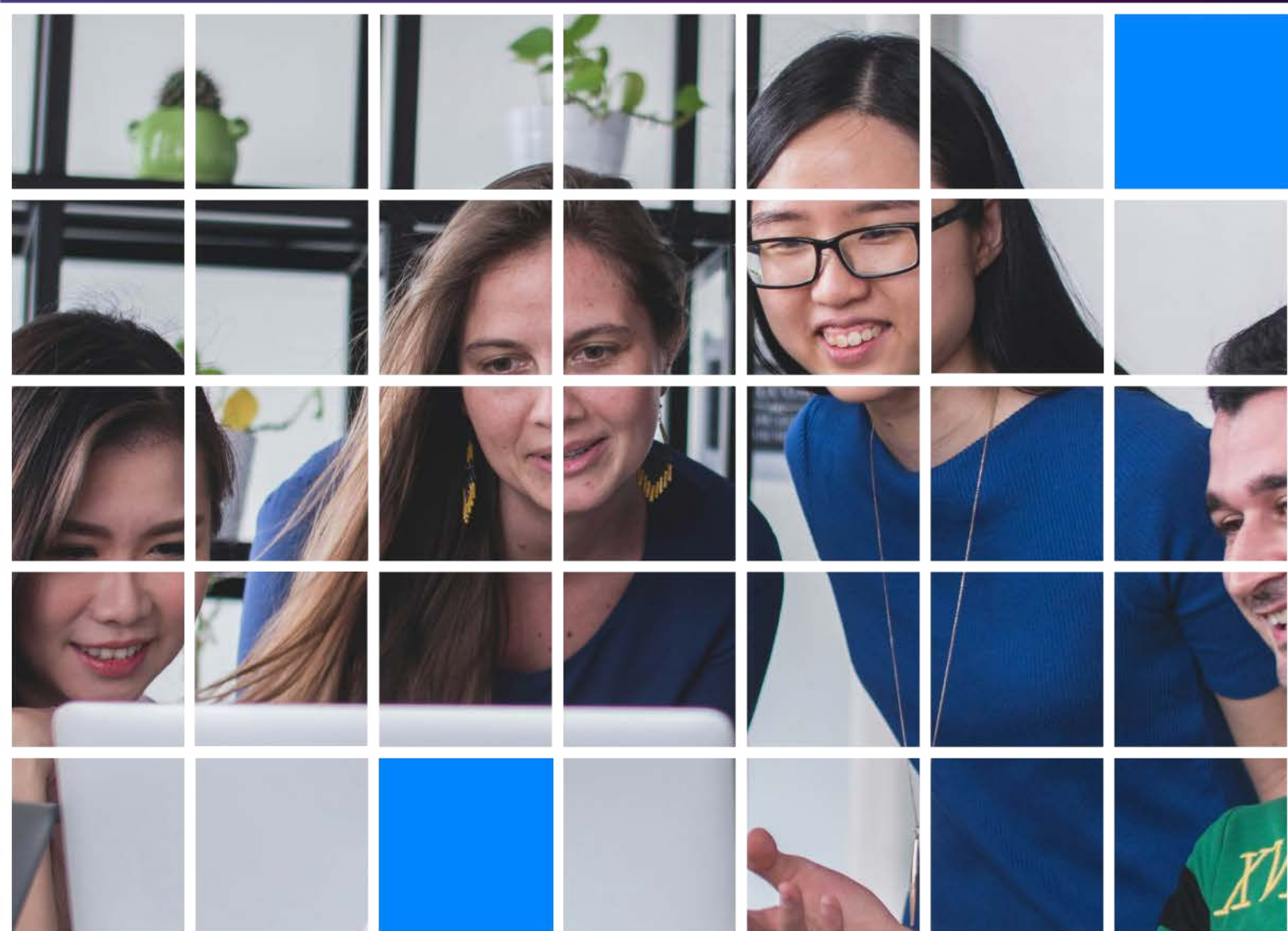


How People Analytics Can Accelerate Your Skills Journey

Embracing a skills-based approach is essential in today's rapidly evolving economy and workplace. This paper explores how organizations can leverage people analytics and HR technology to implement skills-based decision-making. By understanding workforce skills, companies can better attract, develop, utilize, redeploy, and retain talent, ultimately driving higher revenues and efficiency. We outline the steps to collect and organize workforce data, infer and structure skills data, and integrate these insights for strategic decisions.





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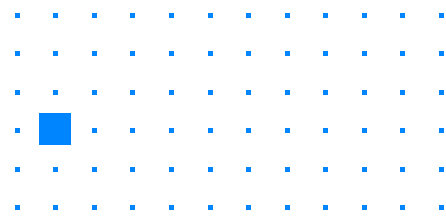
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Introduction

Why do we hear so much talk about skills? Because the economy, technology, workplace practices, and jobs are changing rapidly. Some jobs are disappearing, others are getting more complex. People's attitudes to work are changing, while technology disrupts traditional ways of working. Organizations need means to adapt to these changes.

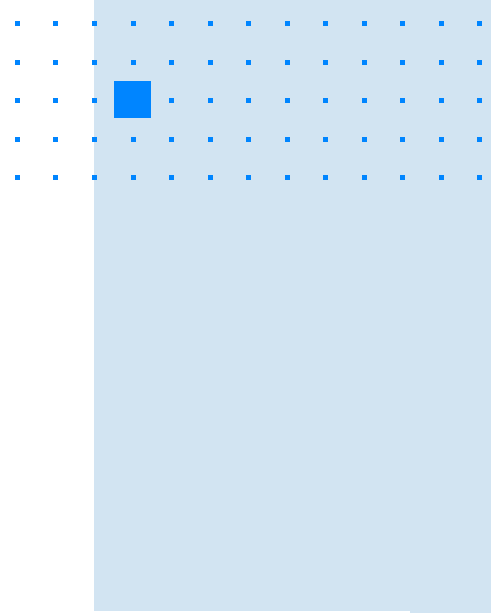
A skills-based approach towards work enables organizations to do just that and fortunately there have been rapid advancements in HR Tech, HR Analytics and Generative AI, that can support this shift. Leading organizations now recognize the value of skills-based people decisions, and the technology is out there to enable this.

So, what does this mean? Organizations that embrace a skills-based approach will compete better in the market because they can address the above-mentioned challenges. When organizations understand the skills of their workforce, they can better attract, develop, utilize, redeploy, and retain talent. Done well, it also allows the organization to remain agile and respond to disruptions effectively. In the end, this leads to higher revenues and more efficient cost allocations, i.e., companies that win in the marketplace.

By 2025, 85 million jobs are expected to be displaced, and 97 million new jobs will emerge. The most competitive organizations will be those who shift to a skills-based approach.

World Economic Forum





To achieve this goal, organizations should re-think their people practices, examine which business questions need a new answer, and how insights into skills could help reach that answer. For example:

- What are the skills we need to perform current and future jobs?
- What are the skills gaps and how do we close them? Through learning? Through hiring?
- How can we ensure better internal mobility so that our people can develop skills that are relevant to them and the company?
- How can we ensure that we are an equitable employer by allowing everybody in our workforce to develop relevant skills?

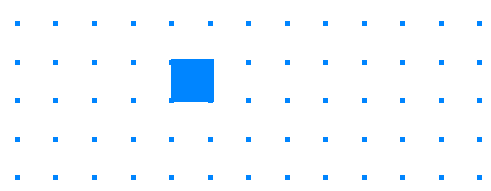
So, what is required to answer these questions? First and foremost, moving towards a skills-based approach implies tackling a data problem. It requires looking holistically at your workforce, gathering the right data points, and translating that data into insights. This means:

- Collecting and organizing your workforce data.
- Inferring and organizing your skills data.
- Connecting the two for skills-based decisions.

This article will take you through these steps and give you an understanding of what is involved in moving towards skills-based decisions. At first sight, the task may seem daunting, but fortunately there is amazing technology that can help you quickly move forward.

Organizations adopting a skills-based approach are **63% more likely to achieve business and workforce success.**

- Deloitte



Organize your current data and create workforce insights

Collecting and organizing data

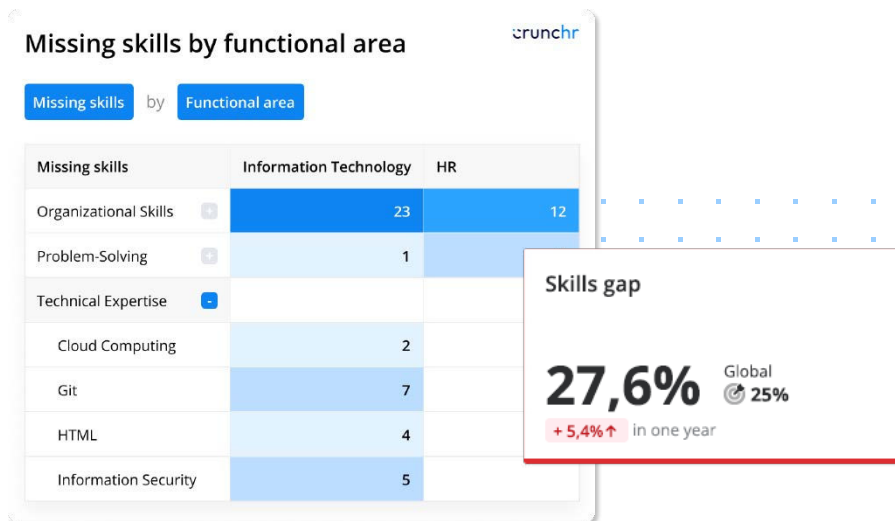
Making skill-based decisions requires insights into your workforce. Those insights can only be gained after you have properly collected, cleaned, standardized, validated, and organized your people data. Typically, this data is spread across a myriad of systems: core HR, payroll, application tracking systems (ATS), learning systems, performance management systems, absenteeism systems, engagement solutions, etc. Sometimes companies even have different systems per geographic area or business line.

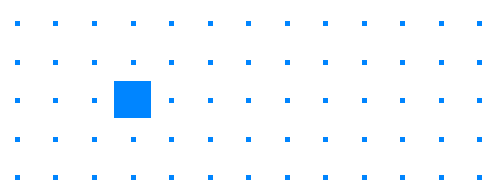
After consolidating the data, it should be organized in a data model. For example, a job family should be connected to a job_id, a gender to a person_id, and a salary to a currency. Moreover, data fields from different systems should be aligned and connected to each employee or position. Finally, each data field requires a time stamp.

Organizations can tackle this problem by consolidating all the raw data in a data lake, manually setting up an ETL process to build data pipelines from the lake or all the individual systems to a BI tool or engage with specialized workforce analytics solution such as [Crunchr](#) who does this for them.

Workforce Insights

The next step is to transform your organized data into workforce insights. This requires translating data into metrics and connecting those metrics to each other. For instance, what is our headcount and our turnover rate? Do we pay our high performers enough? What is the bottleneck that we should remove to promote female leadership? What is driving our turnover? Etc.



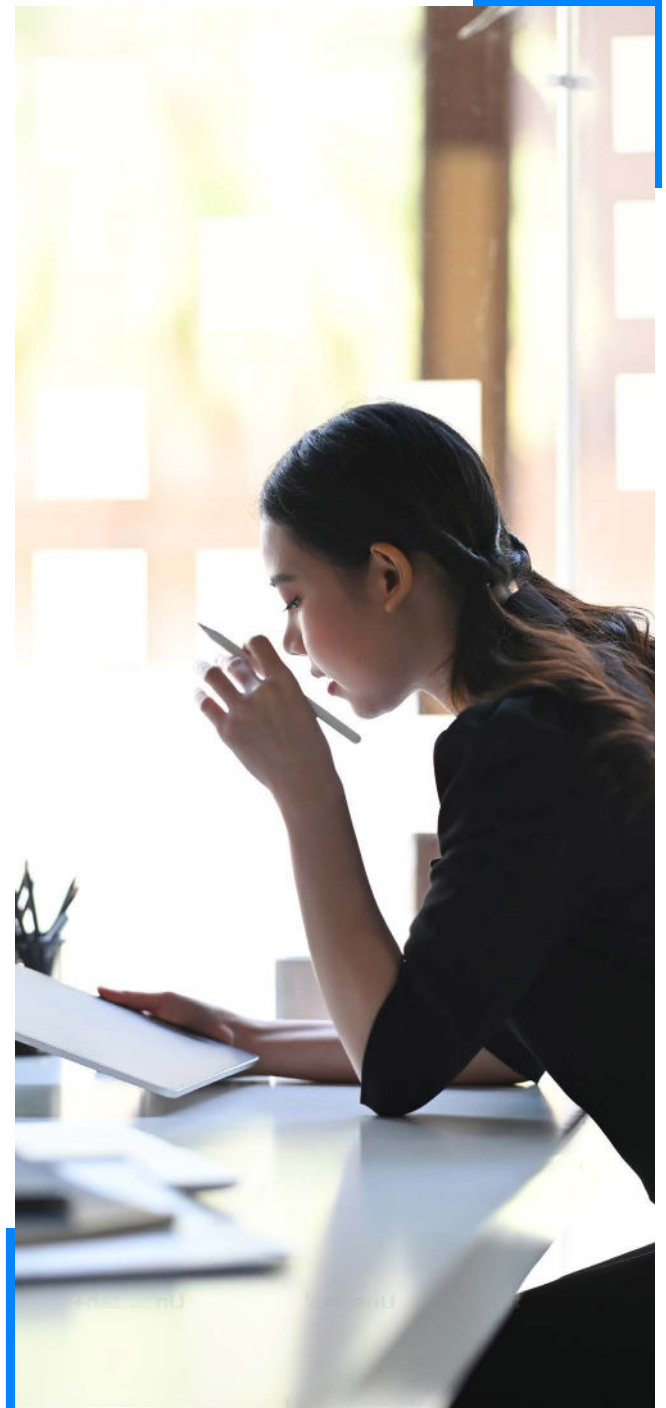


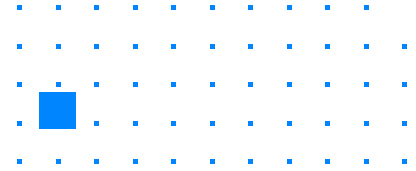
First, this calls for proper definitions of each metric so that you can compare apples to apples. For example, turnover should be calculated similarly across the organizations. This requires agreement on questions such as: are interns as part of the leavers (the nominator) count and are folks on maternity or paternity leave part of the total workforce (the denominator)? And what if they have only been on maternity leave for a small part of the period that you are calculating turnover for: will you include or exclude them? Proper definitions are crucial to move from data to insights.

Next, the metrics must be calculated. This requires a tool to program the logic to make calculations, connect it to different attributes (organizational units, demographic attributes, etc.), and to visualize the data. For more advanced analyses, the tool should be able to work with (AI) models for forecasting. Typically, the first output of all the foregoing work is reports or dashboards that show the relevant workforce insights.

Organizations can tackle this challenge by building this functionality in-house through hiring BI experts or external consultants, or by buying a specialized HR analytics solution such as [Crunchr](#).

In principle, after completing all this work, you have the basics in place to start incorporating skills data. This doesn't mean that your workforce insights journey is done! Next steps are moving from insights to actions, diving deep into specific business topics, engaging in advanced analytics projects, or letting HR and managers access insights self-service. All these come with specific data privacy, technology, speed and adoption challenges. But they shouldn't hinder you to start exploring skills.





Infer and organize your skills data

In the previous section, we discussed how workforce insights can be gained by organizing, transforming, analyzing and visualizing existing data. It does not necessarily require creating new data. That's different with skills because more than 99% of organizations don't have it. The data should first be created and then it can be analyzed.

As skills-based decision-making is relatively new, there is no standardized approach yet. Decisions must be made on:

1. How to organize them?
2. How to infer them (tech vs human, which data sources, how to validate)?
3. At what scale will you do this?

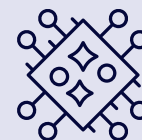
After these steps have been taken and you have your skills in place, you need to decide on how you will govern your skills, who will be responsible for governance, how do you ensure constant validation and updating, and how do you drive adoption. However, in this paper, we limit ourselves to the inference and organization piece.

Organizing skills

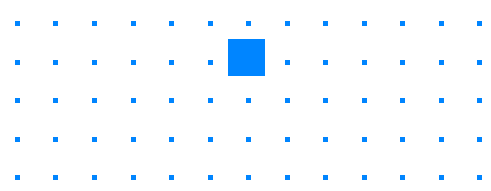
A pre-requisite for working with skills is categorizing them in a skills taxonomy or ontology. This involves defining skills, standardizing them, and deciding how they (hierarchically) relate to each other. For instance, under "Technical Skills," you might have "Programming Languages," which further breaks down into "Python," "Java," "C++," etc.



Skills Taxonomy is a structured classification system that organizes skills into categories and hierarchies.



Skills Ontology is a comprehensive framework that defines the relationships and interconnections between various skills.



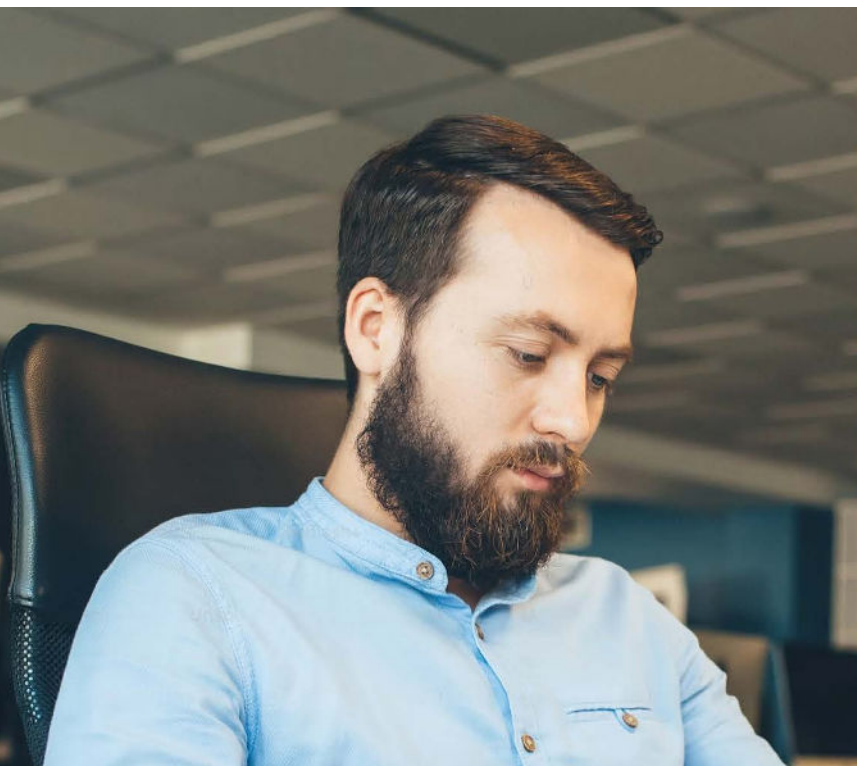
The complexity of taxonomies should not be underestimated. This explains why technology vendors and consultants have taken the effort to develop their proprietary systems, and you will need them to tackle this challenge. There are some public ontologies available, but it is a daunting task to create your own system.

Inferring skills

After you have decided on how to organize your skills, you need to infer them. This is the data creation piece. There are various ways to tackle this:

- You can ask your employees which skills they have directly.
- You can ask managers which skills their employees have.
- You can let consultants or technology infer skills based on employee assessments through surveys or interviews.
- You can let consultants go through various data sources (job titles, assessments, resumes, etc.).
- You can use technology that applies AI-models to infer skills from different data sources (HR systems, learning systems, performance management systems, recruitment systems, project management systems, communication systems, external labor market data, etc.).

The latter is getting more and more popular with the rise of AI, but the accuracy of the inference, the amount of data sources that can be inferred from, and the breadth of data creation (for example, not only inferring skills for employees but also for jobs and courses) differs a lot.



90% of executives report actively experimenting with skills-based methods in various workforce practices.

- Deloitte

Scale

Next to deciding on how to organize your skills and how to infer them, you need to decide on the scale of your skills project. The scale covers four dimensions:

- Analyzing thousands of skills versus twenty skills crucial to your organization.
- Looking at skills across the whole organization versus part of the organization.
- Inferring skills related to employees, or to jobs (to see skill gaps) and courses (to close skill gaps).
- Deducing skills from a few or many data sources.

Deciding on the scale depends on which business questions you want to answer and which resources you have available. From a project management perspective, it can help to start small and then expand. Choices regarding scale also impact your trade-offs regarding organization and inference. If you start with 20 skills in a small part of the business and will only use a few data sources, you don't need an extensive taxonomy and probably come a long way by hiring a consultant or in-house specialist to support you. However, if you want to infer many different skills based on various data sources for thousands of people, you will require help from a specialized skills infrastructure vendor. For example, a leading vendor that covers the full breadth of use cases with AI and APIs is our partner [TechWolf](#).

Tiara Simon

May 2024 Sales Associate

Employee Position Hierarchy **Skills** Performance Succession Timeline

Skills

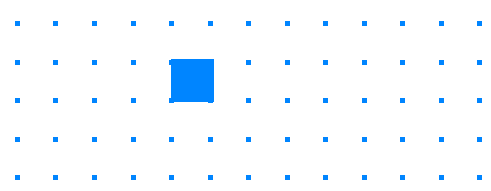
Skill gap

Advanced Project Management Skill Proposal Management Skill RFP Skill

Relationship Development Skill

Overview

Skill	Employee	Position
Account Management Skill	✓	✓
Advanced Project Management Skill	✗	✓
Bid Management Skill	✓	✓
Bidding Skill	✓	✓
Cooperate With Colleagues Skill	✓	✓
Creative Problem Solving Skill	✓	✓
Escalation Management Skill	✓	✓
Liaison Skill	✓	✓
Meet Commitments Skill	✓	✓
Microsoft Office Skill	✓	✓
Microsoft Powerpoint Skill	✓	✓



Connect workforce data and skills data

Now let's discuss where the magic happens: combining skills data with overall workforce data to get actionable insights. This empowers organizations to make skills-based people decisions and creates more business impact.

So, what type of questions are we talking about? Here are six examples:

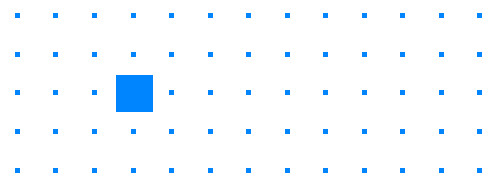
1. What skills do we have and where are the skill gaps, by organization, department, etc.?
2. Are we hiring talent with relevant skills?
3. Do our learning programs address the skills gaps?
4. Which skills are leaving or entering our organization over time?
5. Do we have the right internal talent with the right skills for upcoming open roles?
6. Are we paying the market price for the critical skills we need tomorrow?

The answers to these questions can be visualized in a dashboard and/or democratized with a self-service people analytics solution. This empowers HR and business leaders to spot trends and opportunities and track progress towards goals.

Organizations that embrace this skills-based approach will have a competitive advantage in the market as it will help them attract the right talent, better engage and develop their workforce, and retain employees. This will have positive effects on revenue as upskilled employees are more productive as well as costs because costly learning programs can be optimized, and employee turnover costs can be diminished. Apart from the financials, combining skills with demographic workforce data will also enable companies to create equal opportunities for their people.

Finally, the next step in this journey - of which there is much talk but few practical examples at scale - is skills-based strategic workforce planning. This requires combining skills data, workforce data, and budgets in comprehensive forward-looking scenario models. Considering that 99% of organizations don't have their skills mapped yet, we don't expect to see this at scale soon, but as a technology vendor we will keep innovating to be prepared when organizations get ready for it.





Conclusion

Moving towards skills-based decision-making has a big promise. It allows organizations to adjust to the rapid transformation of the economy, technology, and the world of work. By embracing a skills-based approach towards their people, companies can better attract, develop, utilize, redeploy, and retain talent, ultimately driving higher revenues and less costs.

This requires first and foremost tackling a data problem by integrating workforce data and skills data. It requires consolidating your workforce data and transforming it into workforce insights across all HR domains. Subsequently, you need to go on a skills journey by organizing and inferring your skills. Finally, the magic happens where you can combine your overall workforce insights with your skills data, enabling you to make skills-based decisions and be ready for the Future of Work.

About Crunchr

Crunchr brings all your people data together in its secure data hub and organizes this data. It makes people insights easily accessible to the right people via its user-friendly people analytics platform. With [Crunchr Skills Insights](#), you can connect your skills data to the entire employee lifecycle and unlock valuable insights. Understand the distribution and evolution of skills across your organization. Dive into employee and position skills and reveal skills gaps. Enhance your talent strategy with real-time skills insights. Hire smarter, develop efficiently, retain effectively. Elevate your workforce brilliantly.

Crunchr empowers HR to drive business conversations with insights and confidence.

Take Crunchr Tour

★★★★★ G2: 4.9

