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# Three Ways to Determine Personnel and Digital Skilling Requirements

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## The Enterprise Challenge of Determining Digital Skills Requirements

A challenge and an important Digitalization disincentive that corporations face when considering increasing their human capital digital skills, is to have a clear understanding of which new skills and roles will be needed and in what quantity.

The identification of corporate digital skills requirements is greatly facilitated if Strategic Digital Workforce Planning and Skills Mapping is in place. This Workforce Planning and Skills Mapping entails:

1. The analysis of labour market demands
2. The forecast of skills and labour supply
3. The mapping of decreasing and increasing skills
4. The establishment of professional learning paths of digital Reskilling and Upskilling

For a corporation there are three ways to access these necessary capabilities to engage in Digital Skilling: from government agencies, a few specialized companies, or a leading group of platform-based learning providers.

Additionally, for the handful of corporations that can secure their services, world-class consulting firms provide Workforce Planning and Skills Mapping as part of large, end-to-end, Digital Reskilling and Upskilling programs.

## Digital Workforce Planning and Skills Mapping from Specialized Governmental Agencies

Countries with strong professional educational systems, like Sweden, Germany, Denmark, Finland, and The Netherlands have been conducting these analyses, with specialized public agencies since the 1950s. Furthermore, since the early 2010s, the most digitally advanced countries have applied this know-how, to the specific new skill demands and obsolescence generated by the adoption of digital technologies.

Finland, for example, has the National Foresight Network run by the Prime Minister's Office and Sitra, the Finnish Innovation Fund. Additionally, since 2017 the new National Forum for Skill Anticipation, which acts as an expert body and coordinates nine sector-specific analyses and recommendations to improve education and training.

Estonia is a good example of a country with limited resources, that not only has been able to develop strategic workforce analyses but also a broad set of digital capabilities in a short time. It has done so by collaborating with and learning from the most digitally advanced countries.

The Estonian government has the specialized agency OSKA, a system of labour market monitoring and future skills forecasting. It analyses and integrates labour forecasts, national statistics, and expert knowledge systems provided by the Ministry of Economic Affairs. OSKA generates 5-10-year forecasts of the labour market needs, how many employees are needed by type of occupation, and also the expected competence profiles. The recommendations are available to corporations and are also applied to adjust Estonia's overall academic and professional education systems.

Corporations in countries with specialized agencies that provide Strategic Workforce Planning and Skills Mapping, when facing the challenge of increasing their digital skills, enjoy the advantage of already having their sectors and subsector labour demands and learning paths defined, well enough to be adjusted to their specific cases.

More information regarding the importance and role of Strategic Workforce Planning and Skills Mapping is provided in the article [Digital Skilling, Unprecedented Scale, Impact & Best Practices](#).

Additionally, the Workforce Planning and Skills Mapping as part of Best Practices in Digital Reskilling and Upskilling is analyzed in the article [Digital Advancement - Knowledge Transfer & Skilling](#).

## Digital Workforce Planning from Specialized Providers

Companies and sectorial organizations operating in countries whose government has little or no experience in Strategic Workforce Planning and Skills Mapping can obtain that analysis from specialized companies like Sky Hive and Retrain that even apply artificial intelligence to that end.

Governments in countries with no Strategic Workforce Planning and Skills Mapping may also leverage these providers and enter into collaborative alliances with specialized agencies of leading countries. Denmark in particular, is making an effort to collaborate and export

their accumulated knowledge in this area and in other related ones, to facilitate digital readiness.

This solution may not be cost-effective for a single medium-sized company, but it is for a multi-party effort. Ad-hoc company alliances, consortia created for this end, and also sectorial organizations, can reach the necessary employee volume and resources to engage in these services. In order to ensure each corporation's privacy, the service provider operates as a neutral third party, leveraging sector-wide information and analysing either anonymized or separated data pools of jobs and skills of each participating company.

## From Platform-Based Learning Providers

Single corporations can obtain Strategic Workforce Planning and Skills Mapping analysis at a corporate level as part of a platform-based Digital Skilling program. To obtain these services can be confusing, as the providers most advertised and easier-to-access services, are canned and pre-set batteries of videos for specific roles, with no analysis of the needs of a specific company nor content customization.

CETMO researched the platform-based learning providers' industry in 2022 and engaged in direct conversation regarding the detailed business arrangements necessary to obtain corporate-level customized curricula, materials, administration system, and Strategic Workforce Planning and Skills Mapping analysis.

We unveiled that most providers, such as Udemy, offer only pre-set canned services with no customization. On the other side, the three most sophisticated providers; Coursera, EdX and Udacity, while also offering canned services, also have a separate practice that designs and sets customized and cost-efficient corporate Digital Skilling programs.

Coursera, EdX and Udacity offer Digital Skilling programs that include adjusted curricula, learning paths, administration capabilities, and workforce and skills analyses at a corporate level for programs just above 200-500 employees, depending on the negotiations. This is feasible for large corporations, an alliance of a few medium ones, and small corporations through sectorial organizations.

These three top providers can offer these advanced services in programs of relatively small scale because they have a long and proven track record of partnering with corporations in large Digital Upskilling and Reskilling programs. This experience has provided them with the competencies, resources, accumulated learning materials and behavioural data, to presently offer advanced customized services at a smaller scale.

Examples of their large experience include; the AT&T-Udacity program in 2018, which yielded 100.000 employees reskilled in 4.200 career paths; the Shell-Udacity A.I. skilling program called Shell.AI, in 2019 that trains 2.000 employees annually from its inception; and also the Meta-Coursera program in 2021 to upskill Singapore's population and provide a solid pool of potential employees upskilled in Virtual Reality for its Singapore hub.

More information regarding the role of Platform-based Digital Upskilling and Reskilling is provided in the article [Digital Advancement - Knowledge Transfer & Skilling](#).

## Conclusions

For most corporations, it is a challenge to determine the digital skills that they require to maintain competitiveness. To establish which new skills and roles will be needed, and also in what quantity, corporations have to access Strategic Digital Workforce Planning and Skills Mapping capabilities. These capabilities include labour demands analysis, digital skills supply forecasts, and the identification and mapping of professional learning paths.

Besides end-to-large-scale skilling programs driven by world-class consulting firms, which are out of reach for most companies, there are three track-proven and accessible ways to access these capabilities:

1. Government agencies
2. Specialized providers
3. Selected platform-based learning providers

Companies and sectorial organizations operating in countries without specialized government agencies can obtain the necessary capabilities through specialized providers and three platform-based learning suppliers: Coursera, EDX and Udacity.

### **Reachable Minimum Scale**

The minimum scale to engage with these providers is approximately 200 to 500 personnel being upskilled and reskilled, which usually exceeds the Digital Skilling needs and resources of a single medium company, but that can be reached if few companies engage in a multi-party effort with embedded confidentiality mechanisms to protect strategic proprietary information.

### **Incentive for Multi-Party Cooperation**

For most corporations, multi-party cooperation and pooling of resources through ad-hoc alliances, consortia creation and efforts led by sectorial organizations, emerge as the key way to access the required capabilities to determine and then develop the necessary new digital skills.

The cooperative approach among corporations, sector organizations and even public administration consistently appears as a Best Practice in many areas of Digital Transformation. Countries and sectors with no or little collaborative culture have a strong disadvantage, that can only be reduced by overcoming traditional behaviours and progressively developing collaborative experiences. In this case, public administrations and credible centres of excellence can have a catalyst effect facilitating the progressive development of collaborative structures.

### **Plenty of Digital Best Practices**

The challenges and deadlocks that many corporations face when addressing the improvement of their digital skills are a good example of another phenomenon that CETMO's research has identified when assessing the evolution and disincentives of Digital Transformation. To determine digital skills and human capital, as other challenges for advancing towards Digital Transformation, may be perceived by many corporations in most countries, as a near impossible objective with their existing resources and scale, while in reality, there are plenty of applicable and accessible international Best Practices with a proven track record.

One of the main reasons why Digital Transformation is advancing slower than expected and in an uneven and unbalanced way, is that while the cost to access new digital technologies and advanced new capabilities is low, the necessary minimum digital human capital to make the adoption decisions and to identify and leverage affordable Best Practices is scarce and expensive, it is mainly captured by a handful of advanced corporations. This, in turn, outlines again the need for cooperation and knowledge sharing.

## **CETMO Foundation**

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