Whitepaper

Workforce Design
- a Resource-based Perspective

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Hamburg, 08.04.2019

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Workforce Design from a Resource-based Perspective

Based on a new understanding of workforce, we outline the importance of workforce for organizational development and show different strategic workforce design approaches as a starting point for operationalization.

A new understanding of workforce

Work and its characteristics are highly dependent on social and technological developments. Historically, the concept of workforce has referred exclusively to human resources, which since industrialization has been changed with the machine as a kind of contrast. Shaped by demographic, cultural and technological developments, this understanding is changing. Therefore, the authors see the need for a fundamentally new understanding of workforce.

Instead of the confrontational relationship between man and machine, **the authors understand workforce as the sum of all forces (resources; services) that work for an organization**. With reference to Penrose (Penrose 1959), the force for the organization does not come from the resource itself but from the services the resource render (p.25, Penrose 1959). In analogy to Vargo and Lusch, service means the application of competences (knowledge, skills, technical services, augmented capabilities through technology) for the benefit of another entity (Lusch, Vargo et al. 2008).

Although it is still possible to distinguish between the basic categories human workforce and (technological) digital workforce, the various variants of these categories are appearing in more and more combinations in companies (Gershuny 2003, Guenole, Ferrar et al. 2017, Lawler 2017, Kieliszewski, Spohrer et al. 2018).

Common variants of human workforce are permanent employees, freelancer, independent contractor, interim manager, gig-, crowd-worker, employees of strategic partners, organized service providers like consultants, managed service providers et. al.

An exemplary classification of the variants of the technological and digital workforce could be machines, digital assistants, smart machines, VR technology, robots, AI et. al. Digital technologies make it possible to increase the productivity of organizations; on the one hand through their direct application and on the other hand by enabling to exhaust the full potential of human workforce (augmented work).

With the variety of workforce variants, the combination and deployment possibilities of the forces working for organizations have also increased. These offers a multitude of combinations and services for organizations. According to Spohrer et. al. configurations of people, technologies and other resources that interact with each other to create mutual value are seen as service systems (Spohrer, Vargo et al. 2008)

In this way, we understand **workforce design** – referring to (Peffers, Tuunanen et al. 2008) **as the act of creating the explicitly appropriate workforce combination which interacts with the organization for mutual value creation.**

A resource-based view on workforce design for organizational development

To respond to developments in society and technology companies have to review their strategy (Porter 2008). The challenge is to analyze companies from the resource and not from the product side, and to

find strategies which exploits best company's resources and capabilities relative to external opportunities (Penrose 1959, Wernerfelt 1984).

In this sense, Grant (Grant 1991) emphasizes Hofer and Schendels (Hofer and Schendel 1980) definition of strategy as "the match an organization makes between its internal resources and skills […] and the opportunities and risks created by its external environment." (Grant 1991) This shows the central meaning of the company's resources as the foundation for its strategy. This is not so much about the resources as about the services and benefits they make possible (Penrose 1959). Penrose also recognizes that the potential value of a resource rises with growing knowledge (Penrose 1959). Using opportunities such as the creation of new couples and combinations of workforce resources can improve the use and productivity of the already existing resources.

The challenge in the workforce design strategy development process of companies is to identify the resources and capabilities which constitute a unique and/or the competitive market position. Building upon it, a company has to define the resource (workforce) gaps which need to be filled and to invest in upgrading its resource base (Grant 1991). Grant's analysis of the rent generating potential of resources concludes that companies' most important resources are those which are durable, difficult to identify and understand, imperfectly transferable, not easy to replicate and in which a company possess clear ownership and control – he calls these resources the "crown jewels". Even if digitization must question these characteristics of the most important resources we agree to the essence and emphasize the meaning of workforce in this strategic context. Grant's essence of strategy formulation is to design a strategy that makes the most effective use of this core resources and capabilities (Grant 1991).

By using this approach we express our resource-based understanding of organizational and business development: **Organizational Development as a concrete improvement of functional capabilities understood as improving the ability to adjust, integrate and apply resources** (Warg 2018) .

Therefore, the management of an organization's **internal and external workforce** resources should be the driving force, rather than managing activities such as production or finance (Constantin and Lusch 1994). Workforce and capabilities are major factors upon which a firm can establish and frame its strategy: especially the understanding of the relationship between resources, services, capabilities, and competitive advantage. Building on this understanding it is possible to develop workforce design strategies which exploit each firm's unique characteristics (Grant 1991).

An organization can therefore be understood as an institutional resource system operating with an environmental resource system. Resources can be differentiated into resources that have an effect on the strategy and with this on the unique firms position (operant resources) and resources that are functionally important but do not make a difference in the competition (operand resources) (Constantin and Lusch 1994).

Three approaches of workforce design strategies and their operationalization

We distinguish between three approaches in the development of workforce design strategies.

First, the situation that the organization is doing well and the management with strategic vision wants to use the possibilities of workforce design for innovation (March 1991, Moore 2007). We call this approach "strategic adaption".

Then there is the contradictory initial situation that the organization has an urgent need for action and transformation in individual parts/units or in the entire organization; we call this approach to workforce design strategy "rapid adaptation".

The third approach to developing a workforce strategy we call "explorative development". Irrespective of the company's situation, management would like to get to know the options better through experiments with new alternatives using innovative variants or new combinations of variants in workforce design.

In accordance with the strategy, the appropriate workforce composition must be defined and interaction with the organization must be facilitated in order to create mutual value. Characteristics of traditional organizations such as product orientation, slowness or closeness hinder the integration of and interaction with workforce and thus the creation of service systems and ecosystems. The understanding of the service ecosystems concept is similar to the service systems concept of Service Science (Spohrer, Vargo et al. 2008), which is also based in S-D logic (Vargo and Lusch 2004) - the service ecosystem definition in S-D logic emphasizes the dynamic character of ecosystems which are characterized by the continuous and contextual integration of resources (Vargo and Lusch 2018).

The disadvantages of established enterprises in integrating and application of resources against digital attackers are the reason why traditional enterprises need platforms esp. for the integration and bundling of resources that by their application generate value. For traditional companies without platforms, the exploration of new workforce combinations leads to a tradeoff with the exploitation (the use of the routine knowledge) of the existing resources (March 1991). Platforms enable traditional organizations to turn exploration and exploitation tradeoffs into mutual reinforcement. The adaptation and further development of the existing workforce is a central prerequisite in order to exploit the full potential of existing competences, technologies and paradigms (March 1991). In the long run, advantage may go to organizations that learn and develop fastest (Spohrer and Maglio 2010).

For this platforms require changing the culture and business logic in a company from application of knowledge in fixed patterns to learn, adapt and change to become more competitive (Spohrer and Maglio 2010). For learning, adapting and changing the organization, the target architecture in which the business logic is mapped is therefore very important.

For concrete operationalization that means the organizational change from product - to service dominance, making processes in relevant areas real-time capable, opening up the company for value cocreation and the integration of services, knowledge and other external workforce and in this way making it possible to improve the productivity and development the existing resources. For the significance of the architecture for platforms and the enabling of S-D logic, please find more in-depth material under the terms Service Dominant Architecture and Platform Organization (Warg, Weiß et al. 2015) (Warg 2018) (Zolnowski and Warg 2018).

We are convinced that work is not only what happens in businesses, but also in society at large (Kieliszewski, Spohrer et al. 2018). New workforce design strategies can help both organizations and employees in their development, deployment and in the mutual learning of the organizations and the individuals in it (March 1991). Social and demographic developments resulting in new challenges e.g. shortage of talents, new distribution of work through digitization or the dissolution of traditional family structures raise questions and place new demands on working hours, workplaces and employment opportunities. Modern workforce design provides a part of the answers.

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