

Master's thesis MSc

Title:

Evaluation and improvement of new competence models for more effective competence management in competence-intensive and specialized enterprises: A Study of Quadim

1. Introduction

Competence remains a complex area for most enterprises, especially given the rapid technological advancements and the quick pace of change. HR is often responsible for ensuring that the organization possesses the necessary competencies and are the drivers of effective competence management.

Competence management is defined by DFØ (2022) as a process in which an organization:

- Identifies competence needs.
- Implements measures and follows up.
- Monitors effects and makes adjustments.

According to DFØ, competency mapping is often not recommended because changes occur so rapidly that comprehensive mappings and analyses of competence can become outdated before measures can be implemented. Therefore, it is recommended to look forward and define future competence needs instead of backward.

Quadim's competence platform is a SaaS solution, built by a Norwegian company, to address the lack of competence overview and data in enterprises and industries affected by high pace of change. The platform generates real-time competence data that organizations can use to analyze, map, and identify strengths and gaps. This way, the organization gains access to real-time data that enables quicker implementation of measures, measurement of their effects, and facilitates effective competence management over time.

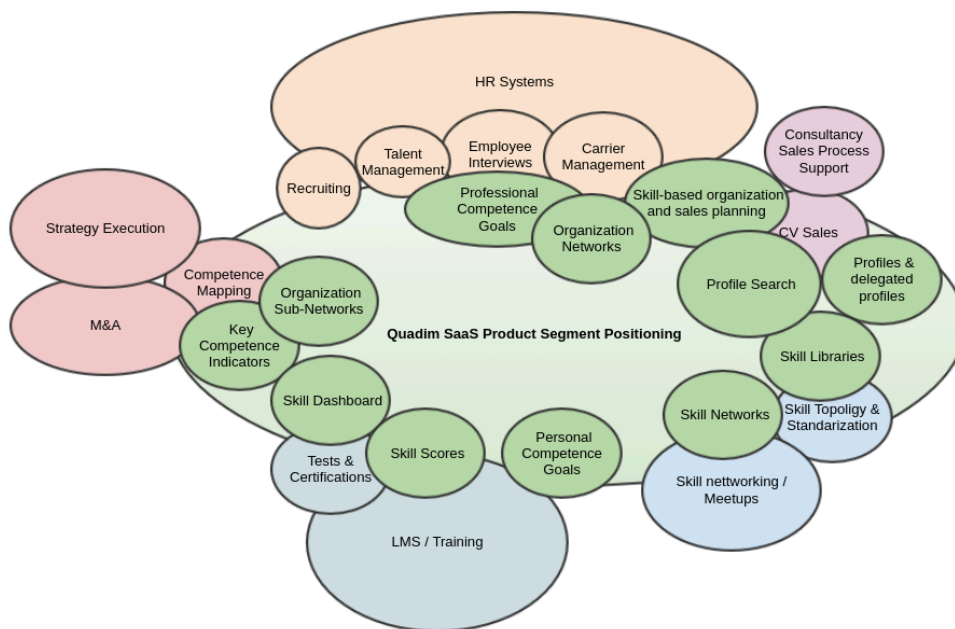


Figure 1. Product positioning

2. What sets Quadim's solution apart?

Quadim aims to address the lack of real-time competence data, enabling organizations to significantly enhance competence management and all related processes. Through our market research, we discovered that the absence of competence data largely stems from current solutions not meeting the needs of the organization. Additionally, current systems struggle in three main areas:

1. Current systems have failed to clearly define what competence actually is.
2. Current systems struggle to engage users enough to input relevant data.
3. Current systems do not handle change.

One of the main challenges associated with points 1 and 3 is that most other solutions on the market define competence as a keyword or a tree structure. Unstructured data models scale poorly and limit data quality for enterprises.

Quadim has attempted to address what competence actually is in a way that ensures longevity and value for both enterprises and individuals. At the core of the platform, competence is defined as a versioned graph with relationships to other competences (see Figure 2). This opens up entirely new possibilities for enterprises to build, map, measure, and strategically manage the organization's most important resource - the people and their competence.

In this manner, Quadim covers DFØ's process for competence management by enabling competence needs to be defined, evaluated, and the data generated can be used for measures. Additionally, Quadim enables the organization to work in a structured and systematic manner with competence over time to address the enterprise competence challenges.

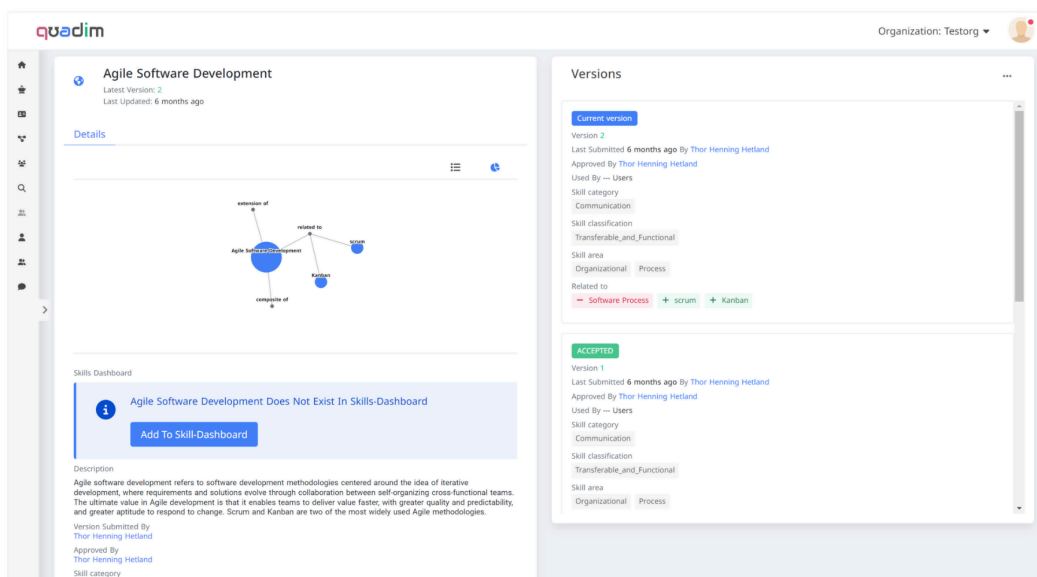


Figure 2. Example of a competence definition as a graph

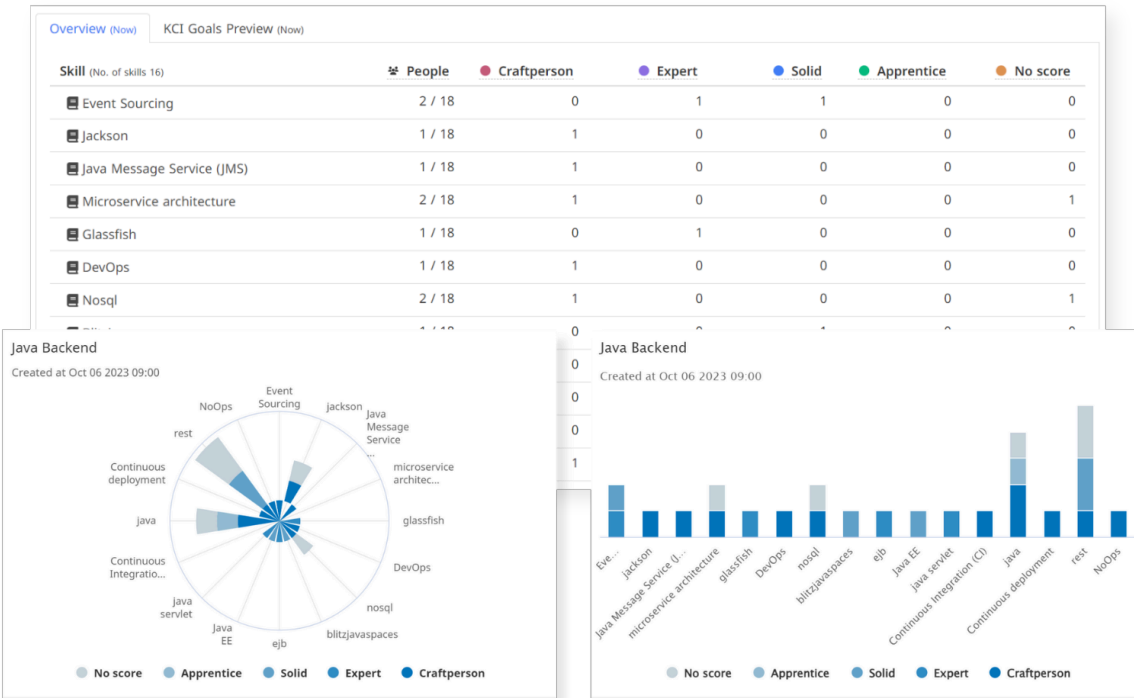


Figure 3. Aggregated data

3. Problem Statement

Due to the high pace of change, a new approach to competence management is required in larger competence-intensive and specialized enterprises. Quadim is built to ensure access to better competence data for organizations.

With this thesis, Quadim aims to test and verify its data models on competence in one or more empirical studies with detailed datasets. The purpose is to uncover whether Quadim's modeling of competence meets the needs of the enterprise, enabling them to engage in significantly more data-driven competence management.

4. The Assignment

Choose one of the following two tasks:

1. Collaborate with an organization or an enterprise in need of better solutions to ensure more effective competence management. What solutions or processes does the organization currently use? To uncover the strengths of Quadim's competence models, it will be necessary to work with the organization to define competence needs, map employees using the platform, and utilize Quadim's models for analysis. Analyze the

strengths and weaknesses of Quadim's model in light of the organization's requirements.

2. Collaborate with an organization or simulate a larger organization and dataset in Quadim. Use machine learning (ML) and similar techniques to identify one or more sets of optimal combinations of competence and individuals to fulfill a competence need in a real or simulated project team. Is it possible to devise ways in which Quadim, aided by the students' ML models, can suggest the best individuals for a project team? Analyze the strengths and weaknesses of Quadim's competence model.

5. Referanse

DFØ 2022. "Prosess for kompetansestyring". In

<https://arbeidsgiver.dfo.no/strategisk-hr/strategisk-kompetanseutvikling/prosess-kompetansestyring>