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EXECUTIVE SUMMARY

Problem Statement

“CFO: What happens if we train them and they leave?”

CEO: And what happens if we don't and they stay? “

The core of every company is its people. Every year companies budget some competence development activities for their employees.

The world is now moving from just having tech competencies to combining them with soft and management part. Now having only technical competence is considered as basis, and companies and employees should know other areas and possess other skills like communication, leadership, analytical mindset, be experts in the domain, understand tech trends and be able to fit them into existing infrastructure etc. All this provide added value to the services the company provides.

Often companies choose the easiest way to get required competence – get it from the market. However, buying other competencies than technical, takes more time, provides risks and unpredictability in cost. This looks like a reactive approach to situation. Itera is the company that wants to adopt a proactive approach in development of needed competencies. Itera now is on its way of strategic re-positioning on the Nordics market. Company observes significant changes on the market and in my work I elaborate on main market changes and how they will impact Itera technological strategy and future goals.

To succeed, company needs to develop completely new competencies than just technical and need to plan it in advance. To achieve it, Itera develops 3D model of competence development, analyzing competencies from different complexity areas. The model is aimed on getting required competencies to support strategy and company growth and do it on time and with predictable budget.

In this work I will:

- Compare 3D model with other existing approaches of competence development and analyze pros and cons of each;
- Adjust model to outsourcing company profile with multiple offices and cultures;

- Develop methodology of model usage in Itera;
- Develop implementation strategy;
- Analyze main changes happening on the Nordics market and based on them and company's strategy pick projects for competence development for 2019;
- Using the model plan competence development projects

The work will not cover:

- 3D model implementation for other company types (product, outstaffing, start-up) or companies working in other industries than IT;
- Justification to complexity areas selected for the model;
- Calculation of ROI of investigated 3D model. Company wants to do strategic changes of services and reposition itself on the market. In order to achieve it, company will adapt changes in several strategic directions, like sales, competence development, delivery model together with providing some organization changes. All these changes happening simultaneously make it hard to track what exactly made the most impact on achieving final result.

Idea of 3D model

The model provides holistic view on what competencies are needed for company considering different parameters like growth scenarios, technological strategy, seniority pyramid, specifics of the projects, distribution of the team between different cities and countries etc. The model is focused not only on the technical skills, but also on soft skills, management area cross-culture competencies. The model and methodology should be unified cross locations and cross business units.

In short-term period, the model introduces project-based approach to management of the budget for competence development, instead of just spending it for ad-hoc activities. In long-term perspective, the model will provide an overview of how many different competencies Itera needs to support different strategies and growth scenarios. It also helps to align company values, strategy and specific goals with some implementation tactics cross offices. This model will serve as a basis for making a management decision:

- how much it will cost for the company to develop competence internally;
- what levels we should include into competence development
- what location is better to develop competence in based on market analysis and cost structure
- how company technological strategy is implemented cross-locations
- how to manage money allocated for competence development between different projects to achieve the best results
- make decisions whether we should develop competencies inside the organization with specified budget or maybe it's cheaper to them on the market.

In any case, with this model the company can manage and control competencies instead of making ad-hoc actions when customer requests some competence or we enter new market. We'll do just-in-time staffing available rather than just-in-case staffing.

My role in the project

The 3D model of competence development was invented by Itera EVP Outsourcing, Igor Mendzebrovski. However, the model should be adapted and implemented in Itera. I will be the main driver of its implementation. For this project, my role will cover:

- elaboration on the model itself and adapt it to Itera, by taking into account Itera business, roles, project specifics etc.
- development methodology of model usage in Itera
- development implementation strategy and driving it;
- using the 3D model plan required competence development projects for 2019 taking into account company's strategy and planned growth.

IMPACT OF MSTM PROGRAM

While writing my master thesis and working on this topic, I thought a lot what role Lviv Business School played in my professional and personal life.

I can say that for me study at LvBS was a period of personal transformation. It's not only about some specific courses, but also about overall atmosphere that was created by LvBS and its people: atmosphere of challenge and support. And I am grateful for that. Every course and every discussion that we have inside the group allowed me to think differently on the issues and challenges that I solve in my company; sharing experience from foreign and local lecturers allowed me to capture other perspectives on the same points.

But the thing that hit me most of all was our study tour to Israel that motivated me a lot and provided thoughts that to build such start-up ecosystem in Ukraine we first of all need to change our people and educate them more in other areas besides technical one. I'm very grateful to the people whose courses provided me valuable insights that I used in this master thesis, i.e. Management 3.0 approach presented by Daniel Lewis; learning organizations and system thinking that we discussed together with Mychailo Wynnykyj during our first course in the program; network organization structures and its challenges that we discussed during the course with Alex Shegda; alignment of company mission, values and strategy with its daily work and how to introduce changes in organizations presented by Andriy Rozhdenstvenskiy and Tom Dybsky during their courses and many others. Not all courses were useful for master thesis, but are very useful for my current position, like two courses on finance.

I would like also to express my gratitude to Andrey Hankevych and others who helped me with their advices and guided me during the work on this master thesis.

CHAPTER 1. BACKGROUND

In this chapter I would like to provide statistics showing the problem that I will investigate and Itera company for commission the context that I work in. My first thoughts related to the problem of building not only technical competencies appeared during the first course of MSTM program, when we were talking about how to build learning organizations and how to develop team together with Mychailo Wynnyckyj. At my company and at my role I see this task as one of the most crucial to implement. And the researches provided below will prove that most of the organizations are concerned now with developing highly engaged and motivated employees as well as building high performing teams.

1.1 Research justifying the problem

“Businesses don’t create value, people do”

People are the ultimate source of sustainable competitive differentiation. Given today’s competitive environment, business and industry demand not only exceptionally trained engineers, but they demand these engineers be educated in the art of leadership, understand international aspects of the business, have innovative mindset etc. In the surveys taken, engineers overwhelmingly reported a change in the nature of their work.

This means having only technical competencies is not enough. The EE Times survey listed the following “soft skills” as extremely important for engineers today [1]:

- Written reports for internal use (83%)
- Team Leadership (77%)
- Resolution of technical trade-off (74%)
- Oral Presentation (69%)
- Project Management (68%)
- Setting of project deadlines (62%)
- Time management of other people in department (43%)

- Written reports for outside publications (43%)
- Personnel hiring (36%)
- Budgeting (36%)

Most job descriptions in IT today include description of some additional skills, besides hard ones. People are used to write in their CVs that they are goal-oriented, problem solvers and proactive without really meaning it. However, today employers are looking for other skills, besides tech knowledge, like working in distributed teams, cross-culture competencies, communication skills, leadership, critical thinking, advisory skills and others.

In the next years, sooner or later, some new and emerging technologies such as AI will eliminate some of routine jobs. This is going to create a huge demand for brand new skill categories.

People are saying that we should prepare ourselves to the Fourth Industrial Revolution.

The First Industrial Revolution used water and steam power to mechanize production. The Second used electric power to create mass production. The Third used electronics and information technology to automate production. Now a Fourth Industrial Revolution is building on the Third, the digital revolution that has been occurring since the middle of the last century. It is characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.[7]

Old business models are going to become obsolete. Digitalization is going to transform business of all industries and invent new business models.

As 2018 Workplace Learning Report [6] by LinkedIn shows, 92% of executives say that soft skills are equally important or more important than tech skills.

In addition, executives, people managers and Talent developers identify importance of the following skills: leadership, communication, collaboration and only after that, role-specific skills (see Figure 1.1)

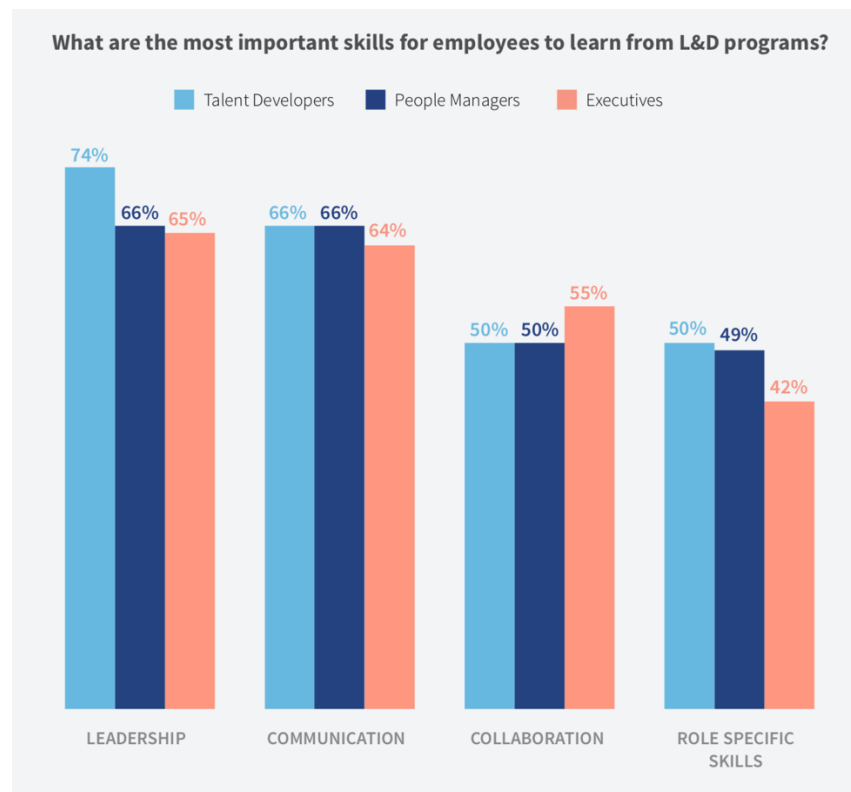


Figure 1.1. 2018 Workplace Learning Report statistics

At the same time, 89% of executives state that it is difficult to find people with strong soft skills. So, for executives the top two questions in the agenda are how to train people with soft skills (#1) and how to identify trends to prevent lack of skills in the future (#2) (see Figure 1.2).

It means that companies need to invest more and more into development of their talents with competencies required by their company and Customers.

I take the position of Head of QA Department in Itera and working with people is my daily job. I'm responsible for communicating with Customer on earlier stages of the project on what services they need in testing and staffing test teams to meet customer request. It includes understanding of customer environment and what people/teams will fit better to that specific environment. For example, if Customer has distributed team sitting in several different locations, having strong collaboration skills will be essential for test engineer working at this project.

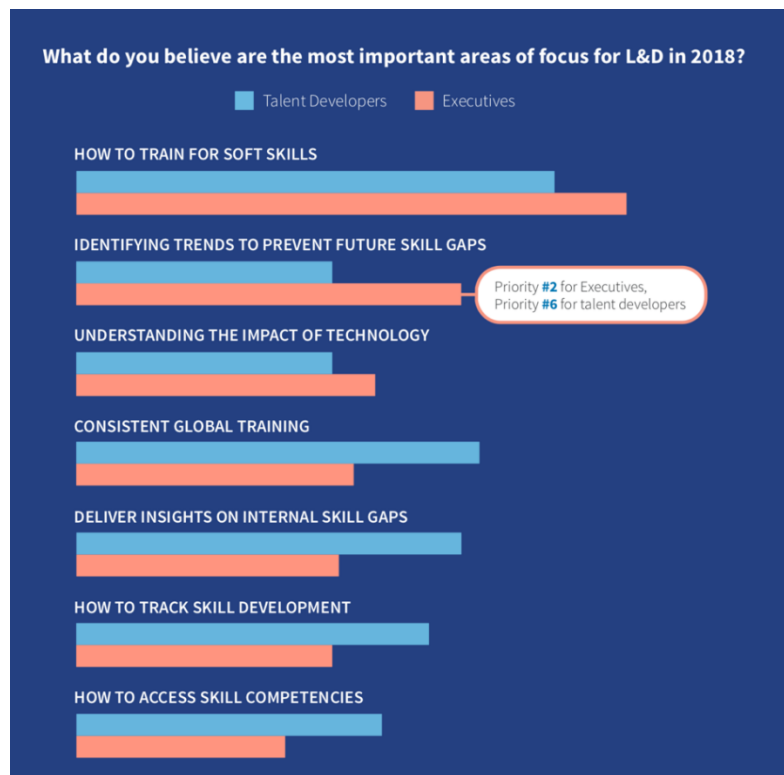


Figure 1.2 Executives survey results from 2018 Workplace Learning Report

Also, I’m responsible for professional development of people working in my department. From my experience, developing hard (tech) competencies is usually not difficult and it is very straightforward: plan several courses, certifications, pilot projects. While development of soft competencies, like leadership, cross-culture skills, problem solving skills is done much harder with no straightforward approach. This process may take many months or even several years for some people. So, people having these competencies developed usually cost more on the market.

Another global trend that also impacts the cost of such competencies is global shortage of IT resources. With global digitalization trend, IT becomes vital part of any business who wants to gain a competitive advantage on the market.

According to the recent KPMG CIOs survey findings [8], the shortage of technical skills is much higher in 2018 than the previously forecasted number. 65% of the CIOs reported that they are facing the shortage of skilled human resources in the software

development industry. 46% of CIOs reported that they use outsourcing to get access to skills; cost saving is a lower priority for such decision.

It means that cost of skills and employees on the market will continue to grow. Forrester projects that firms will pay 20% above market for quality engineering talent in 2018 and beyond.

So, as employers, we need to invest in on-the-job training and skill development to guarantee access to the skills we need the most in an optimal cost.

There are a lot of studies that state that internal people perform quicker and better over the long term than outside hires. By saving money on recruiting external people with needed skills, companies can invest them into internal staff development and trainings.

1.2 Itera context

About Itera

Founded in 1998, Itera is an outsourcing company with headquarter in Oslo, Norway. Company has about 500 employees working in 4 locations: Norway (Oslo), Denmark (Copenhagen), Ukraine (Kiev) and Slovakia (Bratislava).

Itera is a specialist in creating digital business, with communication, technology and innovation as core competency tools. Itera delivers projects and services in cross-functional teams to Nordic organizations.

The company offers consulting and strategy services, design, development, operations and management. The Cloud services create an opportunity to increase recurring revenues through SaaS.

Company owns two sub-brands, Compendia and Cicero Consulting. Compendia provides tools, content and consulting in human resources, management, HSE and quality. Cicero is an industry expert in the banking sector, providing market intelligence, strategic advice and solutions to Nordic financial businesses.

Itera is Top 25 award winner as most innovative company across all industries in Norway in 2016, 2017 and 2018. Itera is listed on Oslo Stock Exchange under the ticker ITE.

Itera industries

With **475 MNOK** revenue in 2018, Itera targets mostly Finance sector, with main customers from top largest banking and insurance companies (see Figure 1.3).

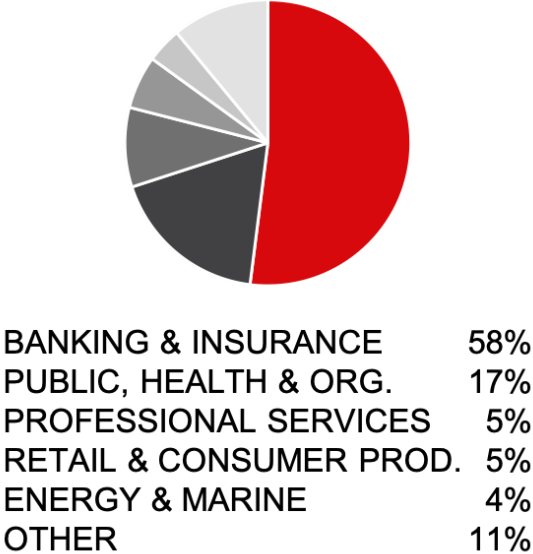


Figure 1.3 Itera revenue distribution by industries

Itera markets

Itera operates in the Nordic market, providing its services to Norway, Denmark, Sweden and Iceland. The main market is Norway. The graph below shows revenue distribution by counties for 2018 (Figure 1.4)

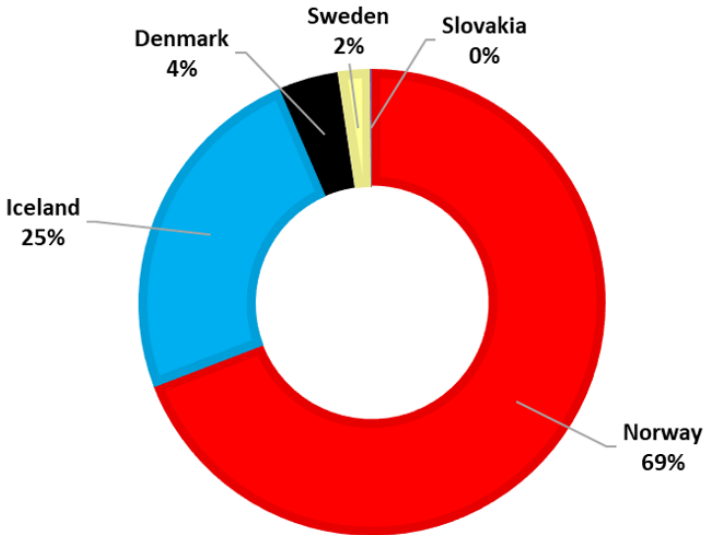


Figure 1.4. Itera revenue by countries

Key customers

Key customers include largest financial institutions in Norway and Nordics, in particular Santander Consumer Bank, IF, Islandsbanki, Storebrand, Gjensidige, KLP and others. See the full map of key customers on the Figure 1.5.



Figure 1.5 Itera key customers portfolio

Key services and competencies

Itera is a full-cycle service provider helping customers in creating digital business. The core competencies in Itera today are:

- Business consulting
- Service design
- Design and UX
- Development and Testing (frontend, java, .Net)
- Solution and Enterprise Architecture
- Service Operations

- Application Management
- Project management

Delivery models

Many vendors offer either onshore or nearshore resources only. Itera’s customers benefit from a hybrid delivery model that enables access to easily scalable, cost-efficient talent.

Itera sees its competitive advantage in suggesting hybrid models, where some key roles are present onsite at Customer’s office, like Project Managers, Architects, Product Owners, Test Managers and the rest of the team is sitting in Nearshore locations (see Figure 1.6). This approach helps to facilitate communications between offices, transfer customer needs and expectations to the team in a clear way etc.

- **Balanced sourcing** (local/nearshore, high competence availability, focus on proactivity & innovation skills)
- **Proven delivery approach** (focus on effective cross-borders collaboration, agility, result-orientation, transparency)
- **Collaboration security** (focus on retention, knowledge management, security aspects)

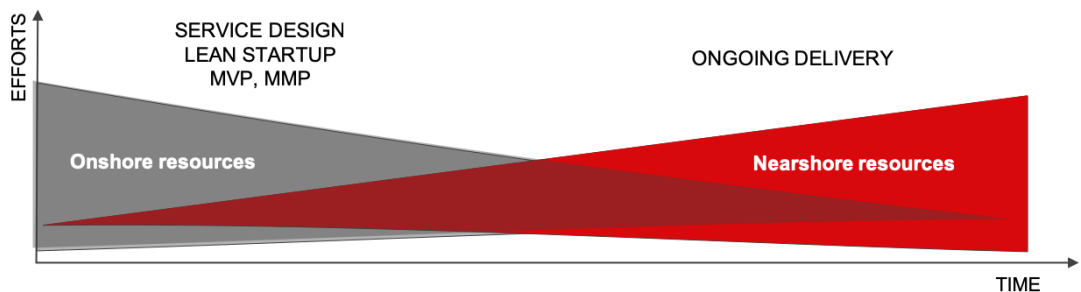


Figure 1.6. Hybrid model implementation

To implement this model Itera needs unification of all processes related to delivery, competence development and team management cross-locations.

Vision and values

Itera's vision is to **MAKE A DIFFERENCE**. Key values that we communicate to our employees are:

- **Innovative.** We are curious and open-minded, and always on the lookout for new ideas and solutions
- **Passionate.** We are proud professionals who put our hearts and souls into our work
- **Skilled.** We set ourselves high standards. We deliver quality to create value that lasts

Security

Itera is the first Norwegian business to be approved as BCR-P in April 2017. It makes possible to:

- be in compliance with the principles set out by European Data Protection Law for all flows of data within Itera
- harmonize practices relating to the protection of personal data within Itera
- prevent the risks resulting from data transfers to third countries
- avoid the need for a contract for each single transfer
- make data protection integral to the way Itera carries out its business

CHAPTER 2. ANALYSIS OF ALTERNATIVES AND ITERA CONTEXT

In this chapter I do comparison of several approaches to competence development that are implemented in IT companies and analyze pros and cons of each approach. I also do an overview of different approaches used in Itera and identify main challenges the company face today with implementing competence development. As a result, I provide my recommendations on what steps the company should take to overcome these challenges and how the 3D model of competence development, developed by Igor Mendzebrovski, can help.

I also provide the overview of the model and analyze its disadvantages and constraints.

2.1 Competence development models and approaches

There is a common knowledge in HR area that there exist set of competence development models. All of them represent mostly Lominger and Spenser competencies combined in different views and attached to company's vision, mission and values. The competencies in such models are usually divided into core, functional and cross-functional competencies.

Although such models form the basis of daily work of HR department, it is quite hard to incorporate them into daily work of Project Managers or other managers who are responsible for technical competence development of employees.

Also, several approaches to competence development planning and adopted by companies:

- 1) Competence development activities are handed off to employees, not by company
- 2) Competence development is planned and budgeted by company with person selecting particular activities
- 3) Project-based competence-development approach planned and executed by company

Let's get into details of each of them.

First approach. Competence development activities are handed off to employees, not by company.

In this approach company provides no training or any other competence development for their employees, but compensates it with salary higher than the market average. Employees can do any trainings, certification etc. without limitations, but pay for them by themselves.

Pros

- No additional budget spent for competence development
- People will improve competences that they lack
- No ‘money-loss’ if person spends competence development budget for some training or certification and then leaves the company

Cons

- In increasing competition for resources, such approach will lead to higher attrition rate, as competence development activities may be considered as retention activities
- Employees will hardly align their competence development with company mission or strategy
- All required competencies should be hired from the market

Second approach. Competence development is planned and budgeted by company with person selecting particular activities.

In this approach competence development is either planned and budgeted by talent manager (HR, linear manager, department manager, PM) or fixed amount of money is assigned to each person. People are selecting competence development activities by themselves based on their interest and approve them with their manager.

Pros

- People can pick activities that correspond to their interest and personal development plans
- Decrease of management overhead for planning competence development activities

- Increased retention compared to first approach
- If selected by HR or other manager, activities can be aligned with company's values and strategy
- The approach works well if company needs to maintain current technical level of employees and get them knowledge of new frameworks and toolset within their existing areas of competence

Cons

- Company doesn't manage competencies; it manages only retention of employees. Getting any new competencies will be fragmented and depend on whether the people have selected to learn this competence or not.
- HRs or Project Managers may not have enough technical competence to advise people on their professional development; on the other hand, team leads may not have enough vision on company's strategy and mission to follow it when picking competence development activities
- More expensive, but trend making events, are usually too expensive to fit planned budget per employee
- Competence development budget is usually spent on activities not directly related to company strategy

Third approach. Project-based competence-development approach

In this approach any activity within competence development is organized and planned as a project. The company selects the projects that will fit company's strategy as well as focus on achievement some local (business unit) goals.

The project within competence development has the same elements as within delivery: roadmap, scope, team and stakeholders, budget, acceptance criteria and project manager.

This approach is more complex and fits best for strategic competence development (like acquiring knowledge on new technology on all company levels).

Pros

- Company manages deliverables of the projects rather than separate competence development activities
- The projects can be tightly coupled to company's mission and values, as well as implement company's strategy and goals in a controlled manner
- There is a clear dependency between the budget spent and results achieved
- Decisions are pulled down to the level of middle managers who drive the projects with top managers defining constraints and budgets for each project

Cons

- Higher management overhead compared to second approach
- Employees can pick only competence development activities that are defined within project or will bring project to success

2.2 Competence development in Itera: today and tomorrow

Competence development approach in Itera differs by location. Itera has 4 different offices, traditionally referenced as Onshore (Norway, Denmark) and Nearshore (Ukraine, Bratislava) with two different approaches. In terms of organization structure, in Itera there exist a role of Head of Department, or Resource Manager (RM), who is responsible for professional development of people belonging to his/her department.

How it was done before?

Onshore.

In Onshore for the past years competence development activities for employees were planned together with RM once a year. The person received fixed budget for the whole year he/she was able to spend for planned activities or any other activities that correspond to his daily job. The drawbacks of such approach in Onshore was that budget was spent on some language courses instead of professional certifications and some conferences instead of several-days practical training. The result was low level of new skills development.

Nearshore (NS).

In NS locations all competence development planning and budget was centralized in HR department. HRs planned all activities, like trainings, certifications, conferences together with some internal teambuildings, management education programs, corporate events into one budget. In addition, there was no separation on competence planning per department.

When person wanted to attend some event, pass certification or buy any book, he sent request to RM who forwarded it to HR. RMs can recommend some of the events for their employees, but they have no control over the budget.

As a result, there was no holistic competence development plan for the organization. Money were spent by those employees or RMs who requested more activities.

How it is done now?

In 2018 the approach changed in both Onshore and Nearshore locations. It should be mentioned that same departments in different locations don't do regular sync-ups or joint planning of competence development cross-locations.

Onshore

Today competence development activities for employees are planned and budgeted together with RM once a year. They together decide on competence development direction for employee and plan concrete activities to achieve it. The budget for each employee is sent for group management for approval.

Nearshore

In 2018 there was decided to give budget for competence development to RMs. Resource managers in Itera are people with technical background, pre-sale experience and strong people management skills. They see tech trends on the market and can help employee in building competence development plan.

Also, RMs better understand the events landscape and can plan more thoroughly professional events, certifications and trainings for their departments.

Today, they proactively scan the market for new events, certifications and suggest them to employees in their departments. Also, they do final approval on competence development requests from employees.

Key problems the company face with current approach to competence development

- 1) Most of the competence development is done in Itera in reactive way: most of the activities are headed towards keeping current level of competence, not developing new ones. Development of new strategic competences was done by initiatives and not planned in advance.
- 2) Realization of company's strategy with concrete tactic steps requires common work of all departments and locations.
- 3) In such distributed organization, it's impossible to develop competencies cross-locations with current processes. To develop new strategic competencies, company need to educate people on all levels from all locations: from developers and tech leads, to advisors and sales managers. It requires tight cross-location and cross-department synchronization and clear vision of the outcome of such competence development activities.
- 4) Management education in all locations is fragmented, without clear goals and roadmap. But development of new managers and leaders is one of the company's goals
- 5) Planning and budgeting of competence development activities is not driven by company goals or strategy, but rather retention. No goals are set for RMs as well, like get these amount of certified specialists or have half of people get skills in new front-end frameworks etc.
- 6) Development of non-tech competencies, like domain knowledge, cross-culture skills, communication skills etc. are not included into budgets at all, while the company sees its competitive advantage in developing these competencies in all employees. Today these competencies are developed with mentoring, ad-hoc

education on short-term leadership or communication external trainings or internal presentations.

- 7) RMs budget activities differently, with average amount of money per employee differing in times between departments. For example, for 2018 Development department in Ukraine planned about \$330/employee, QA department planned \$508/employee and Managed Services department planned \$200/employee.
- 8) Budget for competence development is planned, but not tracked at the end of the year to see the fact spending and do conclusions.

2.3 Managerial conclusions on competence development approach in Itera

Itera is aimed on having control over competencies required as well as process of getting these competencies. Company has **several constraints** that should be taken into account when selecting proper approach to competence development:

- 1) Since company is going through strategic transformation from cost-effective to value-added model, it's important to keep all people involved into competence development planning up-to-date.
- 2) Because of hybrid delivery model, Itera has dependencies between onshore and nearshore resources and need to develop the same technical and soft competencies on the same level.
- 3) The nature of the tasks for onshore employees and nearshore teams working for the same Customer differ. The hybrid model implies having more senior technical role onsite or roles that have to interact more with end-users, like UX designers, advisors or product owners, while extending development efforts to nearshore. It means the company should have a model listing all required competencies and location where is more relevant to have these competencies.

To meet all these constraints, my recommendation will be to select project-based approach to competence development. Also, Itera will adopt 3D model of competence development that will help it to structure required roles and competencies in the company. 3D model allows having holistic view on what competencies are required to move

company from cost-effective model to value-added model. Also, it is a tool that helps the company to align its strategy with concrete tactics in competence development.

2.4 3D Model overview

In 3D model of competence development, the employees are conceptualized as having several technical, soft, and management skills, as well as the ability to work internationally (see Figure 2.1). Practically this development can be seen as follows:

- Technical skills: trainings and conferences, paid certifications, participation in IT communities, etc.
 - Access to top external trainings and conferences
 - Professional certifications
 - Participation in Internal knowledge sharing activities and leagues
- Soft and management skills
 - Internal program for potential leaders and advisors
 - Mentoring and coaching by CEO and managers
 - Business education for leaders
- International skills:
 - Cross-culture communication trainings
 - Learning foreign languages (classes, speaking club and speaking days)
 - Travel and working in distributed teams

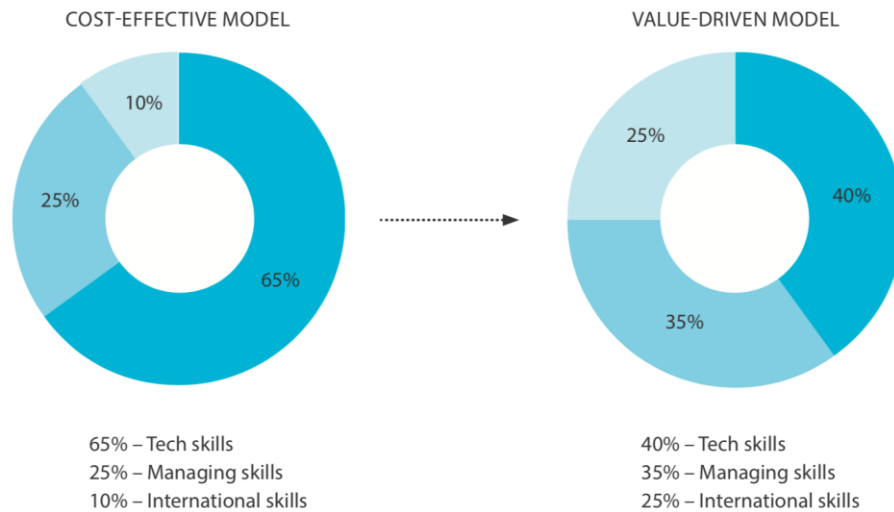


Figure 2.1 Competence composition in different models

3D model of strategic competencies is about evaluating and measuring competencies of each individual broken down on technical, managerial and client facing skills: individual, team and business/organizational level. Knowing what and how many competencies we currently have in the company and how many we will need to have based on company strategy and ambition plans, allows us to effectively plan budgets, trainings and development programs for each group of employees and individuals.

The model is represented with three axes:

1) Intellectual complexity axis,

Represents increasing complexity of skills possession. Tech skills dimension focuses on technical knowledge and trends; Management dimension is all about managing units or different complexity (from self to business units); Clienting skills dimension represents external customer context and markets.

2) Organizational complexity axis

It shows the competencies required for managing different amounts of units and people and is represented with Individual, Team and Business levels.

The figure 2.2 shows the model in 2D dimension with first two axes.

3) Competence seniority axis

The third axis indicates that each competence can be possessed on different levels of seniority: from Junior to Lead. The different level of seniority shows ability of person to solve different tasks (familiar and new) in different contexts (familiar and new). The figure 2.3 represents this seniority distribution.

Finally, we arrived at the 3D model (see Figure 2.4) that combines these three aspects: Intellectual, organizational and seniority complexities.

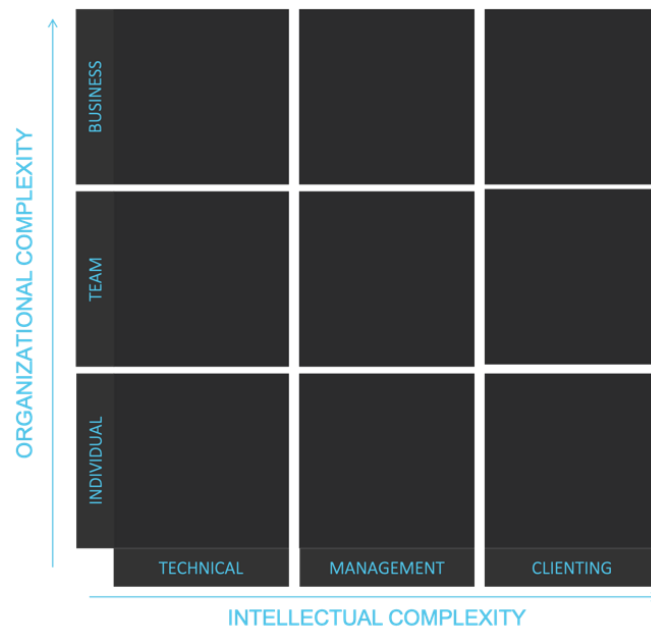


Figure 2.2. 3D model overview in 2D dimension

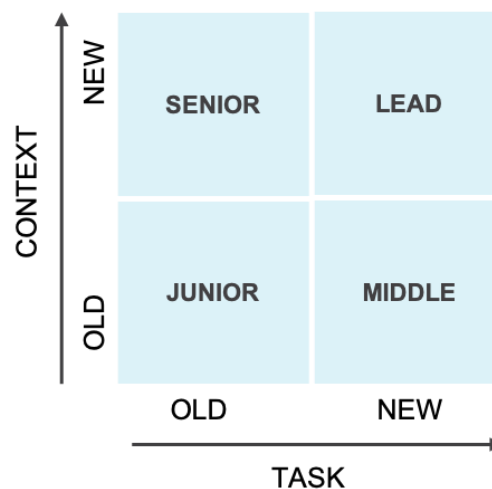


Figure 2.3. Definition of Seniority dimension

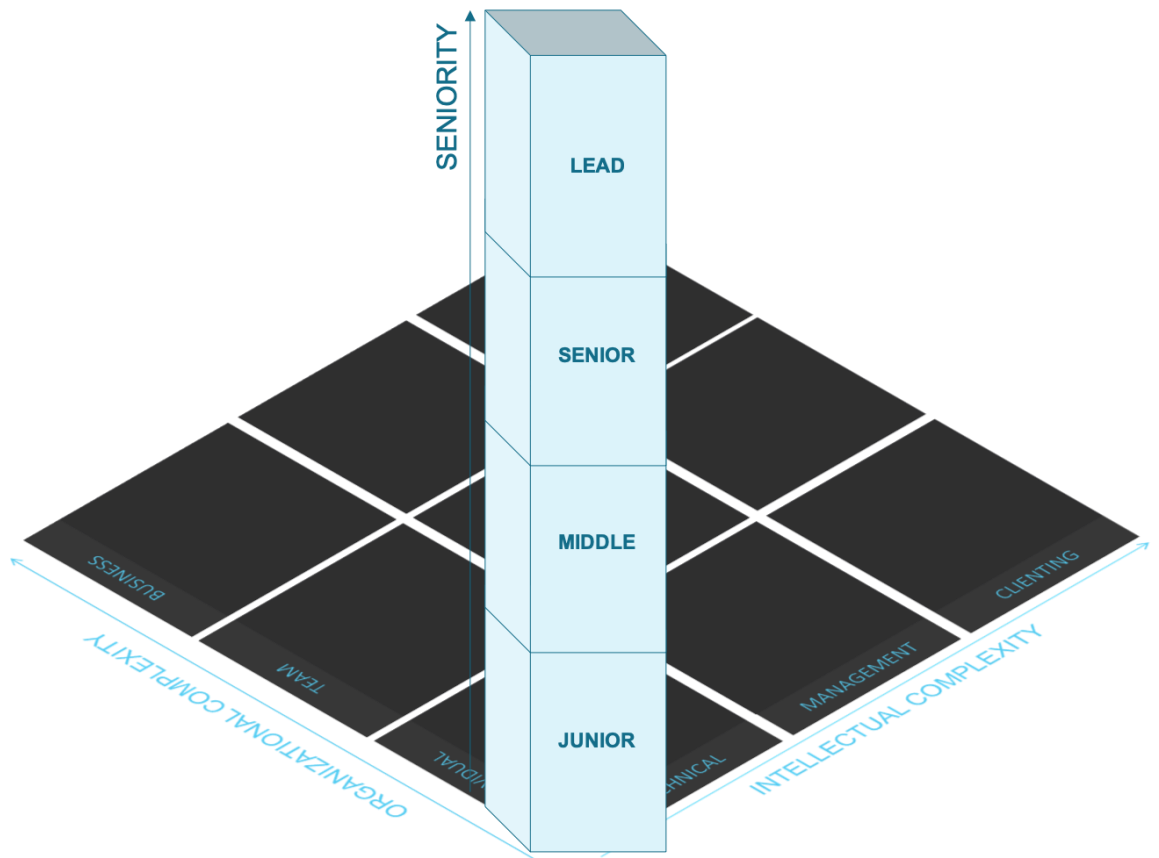


Figure 2.4. 3D model overview

In the next steps of model description, we will operate with 2D representation of the model and keep in mind that each of the competencies/squares can be done with different seniority levels (see Figure 2.5):

- Technical-Individual: technical knowledge and skills required for doing everyday tasks. In IT this is knowledge of programming languages, frameworks, tools and development approaches.
- Technical-Team: understanding architectural patterns, building solutions' architecture, selecting best technological stack for solution taking into account system context, team setup etc.
- Technical-Business: understanding technological trends, managing technologies on the company level, understanding how company's domain influence its tech strategy

- Management-Individual: coordinating team members, distributing tasks in tech teams, mentoring and coaching in developing technical competencies
- Management-Team: managing cross-functional teams (without involving into tech aspect of the matter), understanding group dynamics, team learning rather than individual learning, defining competence development directions for teams and individual employees
- Management-Business: defining resource pyramid and economy of resources placement (where is better to have which competencies based on the internal costs), synchronizing several units on achieving common goal (strategy, KPIs, coordination)
- Clienting-Individual: understanding customer-specifics to make best decisions on individual task level, experience on working with different cultures, domains, user experience
- Clienting-Team: customer expectations management, integrating teams into customer environment to better fit customer needs and economy and find overlaps
- Clienting-Businesses: matching of company strategy to customer strategy, managing cross-cultural units, understanding business trends and global tech trends, working with political and economic contexts

BUSINESS	understanding technological trends, managing technologies on the company level, understanding how company's domain influence its tech strategy	defining resource pyramid and economy of resources placement, synchronizing several units on achieving common goal	matching of company strategy to customer strategy, managing cross-cultural units, working with political and economic contexts
TEAM	building solutions' architecture, selecting best technological stack for solution taking into account system context, team setup etc.	managing cross-functional teams, understanding group dynamics, team learning rather than individual learning , defining competence dev directions	customer expectations management, integrating teams into customer environment to better fit customer needs and economy
INDIVIDUAL	technical knowledge and skills required for doing everyday project tasks	coordinating team members, distributing tasks in tech teams, mentoring and coaching in developing technical competencies	understanding customer-specifics to make best decisions on individual task level, experience on working with different cultures, domains, user experience
	TECHNICAL	MANAGEMENT	CLIENTING

Figure 2.5 Description of each dimension of 3D model

Taking the above description, the following indicative roles match each of the squares (Figure 2.6).

BUSINESS	<ul style="list-style-type: none"> • CTO • Subject Matter Expert • Senior Consultant • Strategist 	<ul style="list-style-type: none"> • Delivery Manager • Resource Manager • Strategist 	<ul style="list-style-type: none"> • CxO • Delivery Director • Business Manager
TEAM	<ul style="list-style-type: none"> • Enterprise Architect • Tech Lead 	<ul style="list-style-type: none"> • Project Manager • Product Manager • Department Manager 	<ul style="list-style-type: none"> • Delivery Manager • Sales Manager • Key account manager • Program manager
INDIVIDUAL	<ul style="list-style-type: none"> • Developer • Test engineer • Infrastructure/DevOps engineer 	<ul style="list-style-type: none"> • Team Lead • Group/Functional Lead 	<ul style="list-style-type: none"> • Business Analyst • UX specialist
	TECHNICAL	MANAGEMENT	CLIENTING

Figure 2.6. Indicative roles mapped to 3D model

The above roles can be elaborated for the following set of competencies (Figure 2.7):

INDIVIDUAL	BUSINESS	Competencies: Building and managing company's tech strategy, technical consulting	Competencies: labor market trends, cost of competencies in different locations, management of organization units , business continuity, organizational consulting	Competencies: Global business and tech trends, business responsibility, political and economic environment understanding, business consulting
	TEAM	Competencies: classic project management, product risk management, enterprise/solution architecture, tech trends, tech pre-sale	Competencies: people management, building high-performing teams, business understanding	Competencies: business understanding, expectations management, sale process, finance
	TECHNICAL	Competencies: Technical skills, like programming languages, frameworks, tools and development approaches	Competencies : Self/ time management, leadership, communication skills	Competencies : languages, cross-cultural competence, communication, skills domain knowledge
			MANAGEMENT	CLIENTING

Figure 2.7. Competencies mapped to 3D model

Model constraints

The model works for any type of organization. However, each company should define its axis of complexity, roles and competencies. The example above applies to outsourcing company with offices in different countries. The outstaffing, product or start-up company might have their own specifics, so model should be adjusted to them.

What is the value of this model?

Adapted to each organization and its business context, the 3D model gives value not only to organizations, in the best use of internal resources, but also to employees who get to develop their skills, and customers, who receive better quality services. The model provides overview of all competencies critical for the company and the structured approach to their planning and development.

CHAPTER 3. IMPLEMENTATION STRATEGY

The chapter covers main aspects of the 3D model implementation in Itera: usage methodology, roadmap of model implementation, team, risks, budget, success criteria and all other aspects of the project.

First, we should understand that implementation of 3D model in the company will be an organizational change and we should plan it accordingly. I, as a leader of the project, will adopt Kotter's model of change implementation that was discussed in detail with Tom Dybsky during his course on Organization Development and similar course from Andriy Rozhdenstvenskiy. He provided me valuable and precious insights on how to do this change in my company and that to succeed, I should connect 3D model implementation with organization mission, values and strategy.

One of the most useful modules for me was module of Alex Shegda on IT strategies where we discussed the organization of IT companies and how some companies move towards network and flat organizations. Itera is doing this transformation to more flat structures as well removing unnecessary management layers and organizing people into virtual offices and teams, and discussions with Alex helped me to better understand all pros and cons of such organization a what problems we might face. I tried to reflect this specific into planning the implementation roadmap and risks of my project.

3.1 Methodology of model usage

The goal of the model is to give effective use of resources (hours, money) while meeting company goals in development of required competencies. The model helps us to adjust our resources dynamically in changing environment.

Step 1. Define competence development goals and identify projects to fulfill the goals

Ideally, all activities in the company related to competence development should fit this model. And the model itself represents strategic direction of company development. So, first the company need to identify its goals. It can be growth in headcount or revenue, it can be stabilizing current customers portfolio and increase employees' retention, it can

be development of new strategic competence. The goals are derived from company's strategy.

Once the goals are identified, we can list concrete actions, i.e. projects, to execute the goals. For example, getting new strategic competence can be a project involving technical and non-technical people to get competence in specified area; stabilizing growth can be done by maintaining current technical competence of the employees and also organize as a project and so on.

Step 2. Calculating total FTEs for each project

For each project in the list we define what competencies we need to get and at what dimensions.

Then we estimate how many people we need to educate in each dimension. For example, development of AI/ML competence in the company means that we need to have:

- Developers who know main tools and approaches in development of such projects
- Data scientists who can build models
- Architects who understand how to build overall data and solution architecture and embed ML component into existing system
- Sales people who understand basic technical aspect of the technology to sell it to proper customers
- Business Analysts or Subject Matter experts who understand customer challenges and how technology can help to solve them in particular business domain

All these competencies lie in different dimensions/squares of the 3D model (see Figure 3.1).

For each square the target amount of people who will possess the competencies is defined. It can be done based on some statistical distribution (if available in the company), like 1 tech lead per 5 developers or 1 project manager per 8 technical staff or tuned manually.

In addition, delta is identified if some of our employees already have knowledge and skills in AI/ML. Having skills on the proper level, these people don't need additional heavy education.

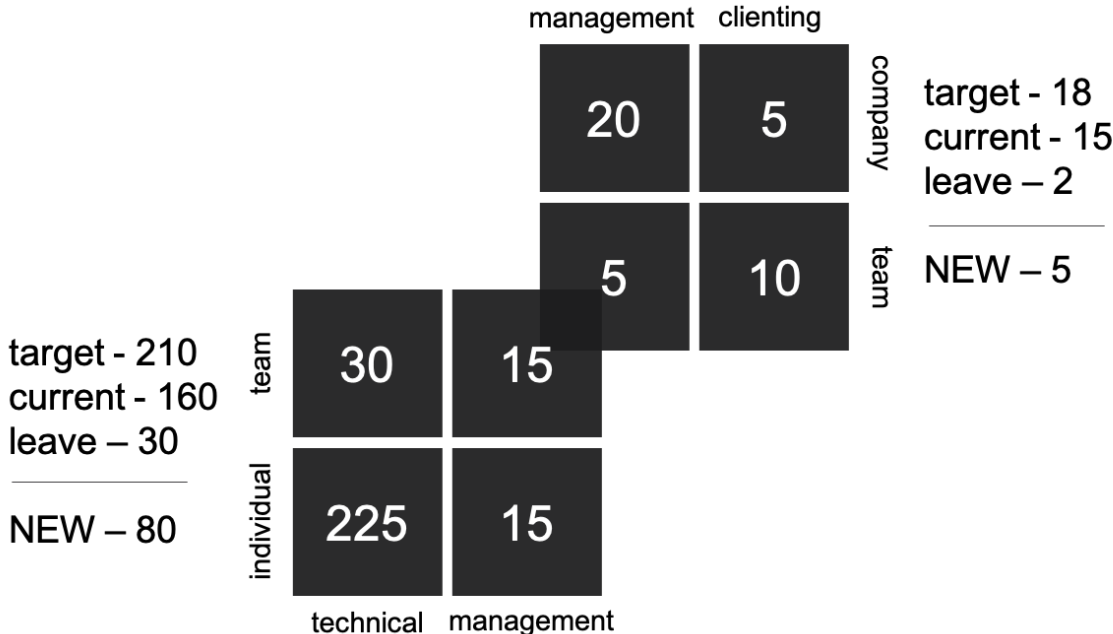


Figure 3.1 Selecting projects for 3D model

Projects may cover just one square in the 3D model. For example, in the projects of cross-culture competence development or increasing knowledge of English (Figure 3.2).

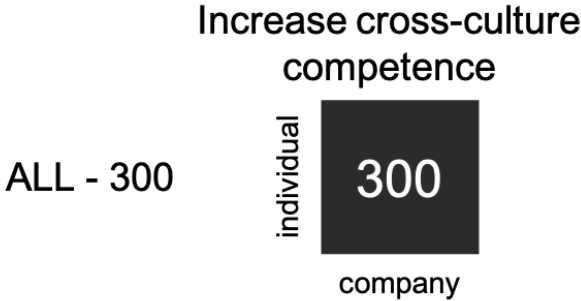


Figure 3.2. Single-dimension project for 3D model

It's important to note that numbers in each square is not the headcount, but number of people possessing this competence. As one person can have competencies from different levels, he can belong to several squares. For example, tech lead will be counting

in dimension Individual-Technical (IT) as he has technical knowledge and can take developer role in the project, but also belong to Team-Technical (TT) dimension due to his knowledge of tech trends and abilities to build architecture of the solutions.

Step 3. Defining cost of learning product for each project

For every square where we have planned number of people to educate, the cost of gaining this competence by one person is defined. The cost includes both cost of external training/certification/conference and internal time of employee spent on it (see Figure 3.3). Internal time then multiplies on average internal cost of hour. Internal cost of hour may vary depending on location for international companies. See example on the figure below. This activity is performed in every project.

BUSINESS	$\emptyset + \$ 2000$		
TEAM	$\$ 250 + \$ 847$	$\emptyset + \$ 529$	$\$ 40 + \$ 532$
INDIVIDUAL	$\$ 400 + \$ 242$		$\$ 250 + \$ 1694$
	TECHNICAL	MANAGEMENT	CLIENTING

Figure 3.3. Calculating cost of learning product

Step 4. Estimating total budget for each project

As a final step, the number of learning products given for each person in the square is identified, thus obtaining final budget (Figure 3.4). The assumption is that at each level people need to have different number of learning products.

BUSINESS	15K \$ + cost of hours: 5K \$		
TEAM	1.5K \$ + cost of hours: 4.7K \$	0.1K \$ + cost of hours: 1.2K \$	0.1K \$ + cost of hours: 0.8K \$
INDIVIDUAL	21.5K \$ + cost of hours: 25.2K \$		4.7K \$ + cost of hours: 24.9K \$
	TECHNICAL	MANAGEMENT	CLIENTING

Figure 3.4. Calculating final budget for the project in 3D model

Step 5. Defining project mandate

As in classical project management, as a next step project mandate should be prepared describing project roadmap, deliverables, success criteria and project manager.

Step 6. Combining all into one model and prioritizing

As a final step, budgets and FTEs from each project are brought together into one model (see Figure 3.5). Each of the projects is prioritized by top management/ head of competence development.



Figure 3.5. Calculating total budget

The methodology allows manage budget by re-assigning it from dimension to dimension based on company's needs. In addition, it provides an overview of how much money in % were allocated to technical, management or clienting tracks.

3.2 Roadmap of 3D model implementation in Itera

Phase 0. Preparation

- 1) Adjust model and methodology to Itera
- 2) Approve it with Project Sponsor
- 3) Create template for calculating projects budget within the model
- 4) Define operational routine of model usage

Phase 1. Planning

- 1) Elaborate on Itera high-level strategy, and suggest detailed projects to start from

- 2) Based on HBU internal goals, define projects on competence development to be put into the model
- 3) Apply methodology of using 3D model to calculate budget for each of the projects
- 4) Define metrics to gather by model
- 5) Train managers in People Office in UA and SK

Phase 2. Implementing in HBU

- 1) Applying operational routine, introduce 3D model into ongoing competence development activities in HBU
- 2) Track results dynamically (monthly) and analyze metrics
- 3) In Q4 2019 gather feedbacks from users of the model (via survey and personal interviews)
- 4) Adjust internal CV solution (CV Partner) with new skills categories based on 3D model
- 5) Make adjustments to methodology or routine, if needed

Phase 3. Implementation in all Itera

- 1) Present the model and gather feedbacks from managers in NO and DK
- 2) Adjust the model if needed for onshore organization
- 3) Define metrics to gather by the model in onshore organization
- 4) In Q4 2019, while doing budgeting for 2020, define projects for onshore organization and apply methodology of 3D model to them
- 5) Ongoing execution

In my work, I will start implementing activities from Phase 0 and Phase 1 (see Chapter 4 for details).

3.3 Deliverables

- Methodology description of 3D model of competence development
- Template of the model in Excel (with required parametrization)
- Using the model, define projects and calculate budget required
- Metrics to be tracked for HBU

- Implementation strategy
- Adjustments to CV Partner solution

3.4 Key Stakeholders

There are two key groups of stakeholders: top management and people managers (department managers and HR). Each group solves its own tasks with the help of 3D model. Below I will describe each of the group in terms of HBU, as we start the project implementation from it.

Top Management

People:

- Igor Mendzebrovski, EVP Outsourcing
- Jon Erik Høgberg, COO Itera
- Olga Litvin, Head of People Office in HBU

Tasks to solve with 3D model:

- Adapt competence development goals and budget to changing context and growth pace
- Focus competence development on key competencies and company strategy
- Give more management decision to the level of middle management, outlining the constraints and keeping control
- Unified approach cross-offices allows common planning and achieving common results regardless of location of resources

People managers from People Office

Roles:

- Liliya Pogorila, Head of HR in HBU
- Tetyana Ponomarenko, HR Generalist in Itera Ukraine
- Pavol Zuffa, HR Generalist in Itera Slovakia
- Oleksandr Storokha, Head of Technology Consulting in Itera Ukraine
- Alex Tiutiunyk, Head of Technology Consulting in Itera Slovakia

- Kateryna Ovechenko, Head of QA department in Itera Ukraine
- Lukas Lancz, Head of QA department in Itera Slovakia
- Andrey Tereshchuk, Head of Managed Services department in HBU
- Volodymyr Oros, Head of Project Management department in HBU

Tasks to solve with 3D model:

- More autonomy in decision making on competence development activities
- Holistic, not fragmented, competence development of employees: not only tech, but soft and management skills development
- Employees better understand company strategy and see its tactical implementation
- Fast reaction if company's growth pace changes, i.e. company is growing faster, but budget for competence development is fixed for plan with slower growth scenario
- Quick search on people with required competencies, hard or soft, in CV Partner (internal CV solution)

3.5 Team

The project will be implemented inside the People Office in HBU. Indicative team looks as following table.

Role	Person	Responsibilities
Project Sponsor	Igor Mendzebrovski	<ul style="list-style-type: none"> - Validate results of the implementation - As an author of the model, validate model adjustment to Itera
Project Manager	Kateryna Ovechenko	<ul style="list-style-type: none"> - Adapt the model to Itera - development methodology of model usage in Itera - Drive implementation of the model in Itera HBU - Provide structure of the 3D model template to Data Analyst

		<ul style="list-style-type: none"> - using the 3D model plan required competence development projects for 2019 - Train people managers to use the model and methodology - Report results to Project Sponsor
Head of People Office	Olga Litvin	<ul style="list-style-type: none"> - Provide input on competence development activities performed in the organization - Provide detailed numbers of competencies required in the organization - Validate methodology of model usage and provide feedback - Participate in identification of key metrics that should be gathered by the model
People Office (people managers)	Liliya Pogorila Tetyana Ponomarenko Pavol Zuffa Oleksandr Storokha Alex Tiutiunyk Lukas Lancz Andrey Tereshchuk Volodymyr Oros	<ul style="list-style-type: none"> - Users of the model and methodology - Drivers of some of the projects in competence development
Data Analyst	Anastasiya Valkina	<ul style="list-style-type: none"> - Implements the template of the model in Excel - Connects different data sources to gather as much data as possible automatically - Does further maintenance of template
CV Partner Project Owner	Yuriy Suvorov	<ul style="list-style-type: none"> - Adjust skills categories in CV Partner to reflect 3D model - Call for CV update round in the company

For Phase 3, implementing the model in all Itera, the team setup will change, as for the project success it is critical to have people from onsite organization in the team who support the idea and better understand local specifics.

3.6 Budget required

The budget required for project implementation is calculated for first 3 Phases. It includes cost of hours spent by people and cost of travel to Slovak and Norwegian offices for some internal workshops and meetings related to the 3D model implementation.

No new toolset is going to be used with this model. The model template will be implemented in MS Excel. Further digitalization may be required but is not considered now.

ROLE	ESTIMATE, HRS	TOTAL COST, USD
Phase 0. Preparation		
Project Manager	24	USD 912
Head of People Office	6	USD 228
People managers	0	
Data Analyst	8	USD 304
CV Partner Project Owner	0	
COST OF HOURS	38	USD 1,444
COST OF TRAVEL	0	
Phase1. Planning		
Project Manager	48	USD 1,824
Head of People Office	4	USD 152
People managers	16	USD 608
Data Analyst	0	
CV Partner Project Owner	0	
COST OF HOURS	68	USD 2,584
COST OF TRAVEL	1 trip to SK	USD 1,500
Phase 2. Implementation in HBU		
Project Manager	100	USD 3,800
Head of People Office	20	USD 760
People managers	72	USD 2,736
Data Analyst	8	USD 304
CV Partner Project Owner	24	USD 912
COST OF HOURS	224	USD 8,512
COST OF TRAVEL	2 trips to SK	USD 3,000
Phase 3. Implementation in all		
Itera	<i>to be defined after the Phase 2</i>	
TOTAL COST	USD 17,040	

3.7 Risks

Risks overview are presented in the matrix below (Figure 3.6).

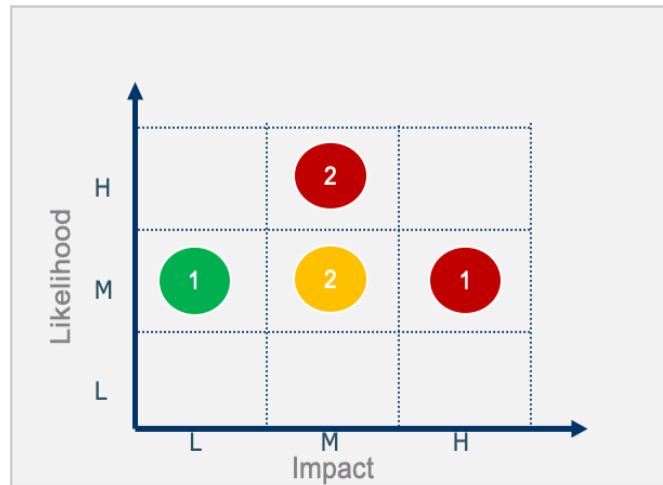


Figure 3.6 Risk matrix

Risk	Risk level	Mitigation plan
Budget of getting required resources from the market appear to be less than growing them internally according to 3D model	MEDIUM	For each of the projects, evaluate the market and cost of hiring required competencies from the market vs investing money into growing them internally. This should be included as a mandatory analysis while preparing project mandate within 3D model.
Too big differences in different business units to operate within one 3D model may result in more overhead in agreeing the common way of work	LOW	Start involving NO and DK sides in the process as early as possible to shape 3D model together and adjust it.
Sabotage of implementation of changed process in some locations	HIGH	Highlight gains from the model. Get required people onboard to create the team and make people part of the decision.
Model implementation will not solve current pains of its users,	HIGH	Provide quick wins for model users. Take most of the overhead to be processed by

but instead will provide more overhead on managing it		Data Analyst (gather data from different sources, do tracking)
Calculations in the model take average process per learning product in each project. The fact price may vary a lot, thus changing the final budget	HIGH	Do detailed planning per project, plan separate activities on each level of the 3D model and estimate their cost.
Changes of company goals and, therefore, project priorities on the way of their implementation may have negative impact on final delivery	MEDIUM	Do regular review of projects progress within 3D model, once per quarter, together with management and decide whether project is still aligned with company priorities for current year and planned growth. Do adjustments if required.

Contingency plan

Usage of 3D model will be part of overall re-organization happening in Itera. If after pilot phase, project team will see that model doesn't work as expected or doesn't provide required benefits, the 3D model can be transformed into career roadmap for the employees, showing the skills required for each role on each dimension.

3.8 Success criteria

- Working model and methodology is incorporated by all departments in HBU
- Next year budget planning for competence development is done using the model
- Feedback from target groups (top managers and people managers) and from employees on model implementation have NPS score of 7.5 and higher
- Evaluation of results at the end of the year shows that target for each project is achieved within specified budget. The allowed deviation in budget and headcount for each project is no more than 10%.

CHAPTER 4. 3D MODEL IMPLEMENTATION IN ITERA

In the last chapter I present the results of the first phase from my implementation roadmap. In this chapter I will present my analysis of the trends on Nordics market from different perspectives: technological, market and customer, as well as analysis of competitors environment. My conclusions are based on analysis of the global researches of Nordics market as well as interview with representatives of Itera sales department and my own observations as a person participating in sales process regularly.

The main outcomes that helped me to do this analysis were taken from the courses of Stephen Russo and Alejandro Danylyszyn. At their courses I've learned how to see the signs of technological changes that are about to come to the market and analyze the forces driving disruption in today's business environment.

Itera has high-level technological strategy, however, based on the market trends and changes that are coming within next 5-10 years, I did my recommendations on what competence development projects should be started in Itera in 2019 and later to fulfill the gap in competence in the company and have competitive advantage in the Nordics market. After defining the list of projects for 2019, I used 3D model to align these projects with company strategy, define deliverables and calculate the required budget for each of the projects.

4.1 Key trends in Nordics market

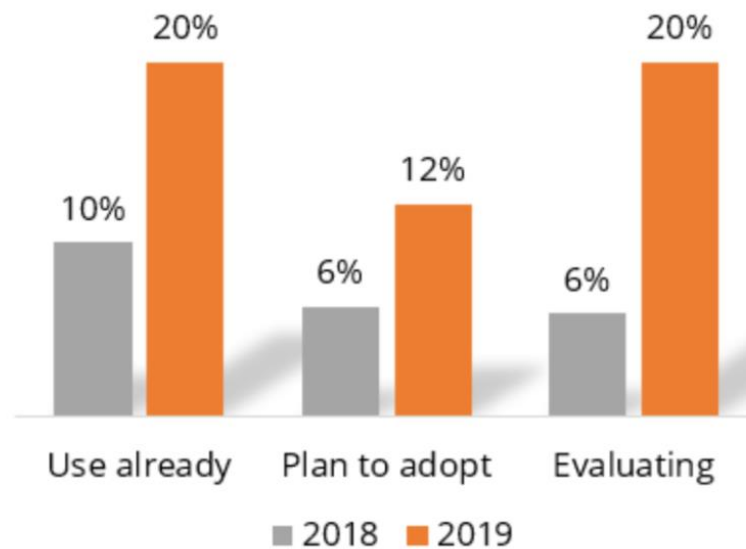
Below are key trends Itera observes on Nordics market from different perspectives.

Technology trends

1) Artificial intelligence, IoT and cognitive services in cloud platforms gain traction and become intelligent

The AI market is propelled by a rapidly growing adoption, as organizations seek to both optimize and improve processes through AI enabled automation. The corporate sector is not really started using it, as in most cases they don't understand what area to start from. Few IT vendors on Scandinavia market have successful showcases using AI and ML. However, the trend is expected to change more and more in the upcoming

years, as platforms and clouds provide easier instruments for AI usage (see Figure 4.1).



Source: IDC EVM Survey, October 2018 (N = 350)

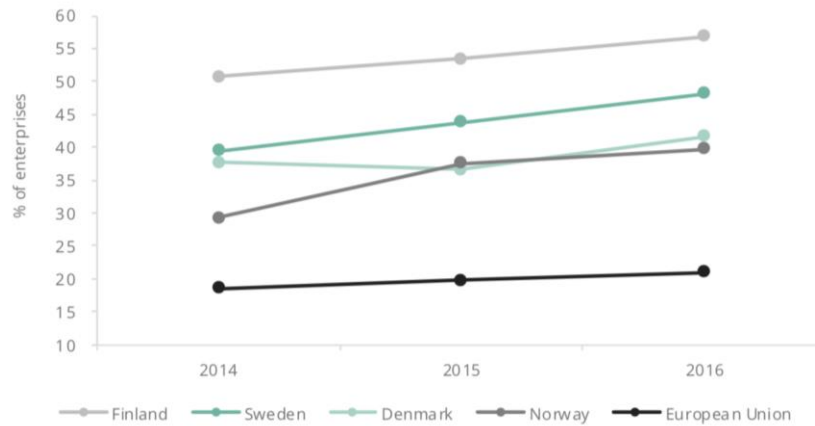
Figure 4.1 AI adoption in Nordics Enterprise from 2019 Nordic Digital Insights Report

IT vendors need to both embrace AI to remain competitive, and to understand the needs, preference, and challenges end-users face in their AI adoption and use.

Organizations in the Nordic countries spent in the vicinity of 300 million Euro on AI solutions in 2018 and with a 35% average annual growth, AI spending will surpass 1 billion Euro by 2022. [9]

2) *Hyperscale cloud platforms are targeting 70 % of data processing capacity*

In 2019, the cloud spending will surpass traditional infrastructure spending, and by 2022 70% of infrastructure spending will be on cloud (see Figure 4.2). [9] Cloud to the edge with 1 million of new IoT devices entering Internet per hour



Source: Digital Agenda Scoreboard – European Commission, Beringer Finance

Figure 4.2 Percentage of enterprises buying cloud computing services from Nordic IT Services market report

Companies seek consulting, system integration and managed services to help with the migration of their infrastructures to private cloud models in their attempt to prepare for the digital transformation. For public clouds, companies demand advisory, deployment and integration services. [10].

- 3) *Voice becomes the preferred UI, while AR/VR is reaching tipping point. Growing focus on intelligent experience.*

The use cases of voice user interfaces (VUIs) in financial services are currently mostly limited to checking balances and paying bills. The next step is more personalized solutions, financial coaching, and seamless guidance through different interfaces. [4]

- 4) *Blockchain is an emerging digital platform, still focusing on user cases*

However, blockchain technology yet hasn't embraced into most of organization projects. From Itera observes on the market, some companies are just experimenting with the technology to see the outcome that they can gain.

Market trends

- 1) *Digitalization becomes the mainstream*

The Nordic countries are the ones that use digital services the most. They are in the top four in Europe according to the European Commission's indicator of economic

and social digital development (DESI). The population has a high level of digital skills. The foundation is cemented through a good infrastructure with a high penetration of fast wired and wireless communication services. This in turn facilitates for excellent digital services both from the private and the public sector (see Figure 4.3). [10]

Digitalization moves from an innovative trend to a core competency in every industry, automating more and more processes and tasks.

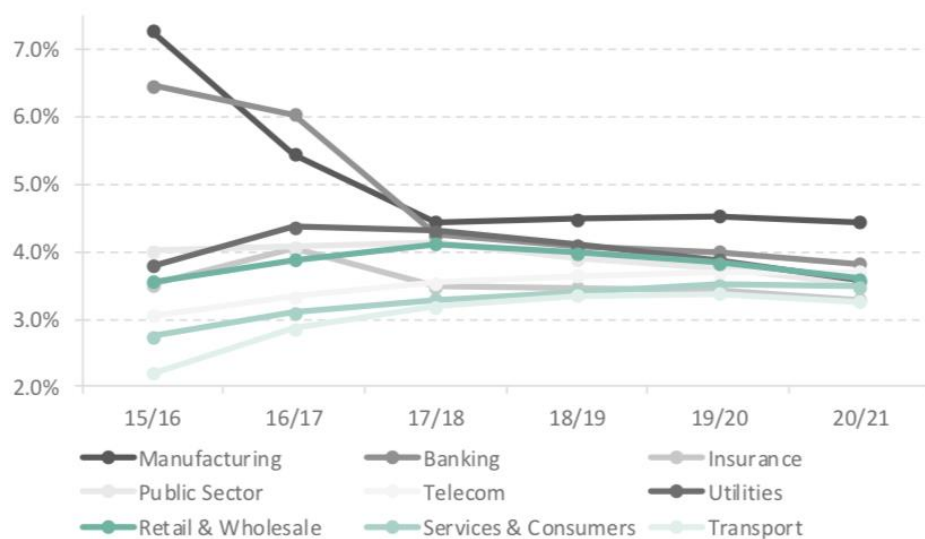


Figure 4.3 IT services growth rates: vertical segmentation from Nordic IT Services market report

- 2) *The platform economy gains traction, with 500+ industry specific platforms already*
 There are two types of platforms developing in the market today: technology and business platforms. Technology platforms combine different set of tools that can facilitate building technological solutions. Business platforms, in comparison, provide a foundation for where different resources and stakeholders can come together. Examples of consumer platforms are Airbnb, Uber and similar.
 Nordic market is experiencing raise of business platforms, with companies that build basis and provide tools for data exchange between companies from different sectors. For example, recent Itera customer Cognite builds a software solution that provides

access for their customers industrial data in real time with all required reporting and views. Another company, BITS, together with Itera created a gateway to simplify the data exchange between the financial and the public sector.

3) *The combination of digitalization and collaboration is the main driver of innovation in the Nordics market*

Nordics market has the highest degree of technology penetration into all areas of business and life of people. Business have long understood that investing in IT can bring them competitive advantage on the market.

However, another interesting specific of Nordics is that they are quite eager to cooperate with competitors (especially in Norway) to build new solutions and fight global players. For example, the ecosystem—Vipps + BankID + BankAxept—controls most of payments between people, individuals and businesses, and between businesses, leaving Visa, Master Card, Apple Pay and similar solutions behind the scenes.

4) *Smart industries gain traction, i.e. smart utility, smart city, smart homes, smart buildings etc.*

By 2020 1 million of new devices will come online every hour. GB and TB of data will be produced by smart cities, homes, factories and cars. Companies on Nordic market are experimenting with cloud, mobility, big data analytics and other technologies to work with these data. Digital twins are the bridge for them that unites physical and the digital world.

5) *GDPR and cyber security are key concerns*

All modern technologies, unfortunately, also generate a complex future, where vulnerabilities tend to appear. Cyber security is the core part of any digital solution appearing today. There is an expanding attack surface due to third party platform technologies and upcoming innovative tech such as IoT, robotics and cognitive tech. At the same time, there is an increasing number of corporate mobile users, use of cloud-based technologies and social networks. Thus, the importance of IT security has

shifted from being a concern of the IT department to a risk requiring the attention from both the CEO and the board.[10] The Figure 4.4 below shows the impact that security attacks have on businesses. And fines are getting even more stricter with GDPR coming on the stage.



Source: IDC Nordic Security Survey, January 2019 (N = 201)

*Figure 4.4 Effects of security breaches in Nordic organizations
from Nordic IT Services market report*

Businesses must understand that this is a question of when, rather than if, a breach occur. The approach must change from reactively blocking to proactively preventing intrusions and minimizing risks. Contingency is at least as important as protection and security-by-design need to be incorporated on every step of the continuous software development.

Competitors landscape

There are several companies, direct competitors of Itera, in Scandinavia market that work with similar model, like Bouvet, Sogeti, KnowIT, Evry etc. By analyzing their offerings and analyzing customer feedbacks in bids the following trends are visible in competitors' environment.

1) *Hard competition for digital talents amongst customers, vendors and startups, especially for local people*

According to Statistics Norway, there are currently 45,000 employees in the customer and supplier side of IT, and the number of graduate IT students per year has recently increased from about 2000 to 2500. Furthermore, it is assumed that about 1500 IT employees retire annually. Innovation are encouraged, and some of the IT competence pool will go to start ups / go abroad. All sectors of society are to be digitized at the same time, and the demand for IT expertise increases.

2) *Large advisory companies build capacity in UX and technology, thus providing full-cycle services from consulting and strategy advisory to implementation. New niche-companies focus on innovation in AI/IoT*

New business models and eco systems creates industry fragmentation Itera observes that in Nordics companies from different vectors build tight collaboration to innovate on business models and solutions and lead the digital transformation of the entire value chain in the industry.

For IT vendors this gives unique opportunities to develop industry-specific solutions that are vastly superior as the industry players possess profound business understanding that they are willing to share with the technology partners. However, it also requires a different approach to the market – most noticeably a willingness to co-innovate and share risk and profits rather than getting paid for a defined delivery. [9]

For example,

- Tradelens: Blockchain based Digital shipping platform led by partnership between IBM and Maersk.
- H&M and Klarna: Clothing retailer H&M and fintech company Klarna will develop an omni-channel payment service integrating digital and physical customer experience.

- Tieto Forest Hub: Finnish IT-services vendor Tieto has created a transparent forest business system connecting stakeholders and sharing data and transactions in an ecosystem.

3) *Indian global sourcing players are less competitive on customer agility and innovation*

Increasingly, customers will be focusing more on the value delivered than in cutting costs. IT outsourcing companies will become systems integrators and partners to their customers. They will share greater risk and focus on delivering value-added services. As digital transformation shifts IT from being a cost center to a business enabler, and change customer requirements and preferences, IT vendors existing value propositions become obsolete. The transformation of the IT industry will affect pricing and investment levels and new strategies, products, and services as well as capital required to execute, will create pressure as growth in Nordic IT-spending stays well below double digits. [9]

Customers are increasing their requirements to agility of their IT service providers to catch the fast-changing market and help them lead digital transformation of the businesses. They expect tech experts and consultants to advise and help them build better user experience for their end users. This require new tech skills and advisory skills, that most of Indian global players can't possess.

It moves outsourcing in Norway from Indian market to Eastern Europe.

Customers

By taking several biggest Itera customers and being part of pre-sale process, I see the following changes in Customers environment and organizations.

1) *Business managers take more control of IT budgets, changing gradually towards projects, products and services, rather than 'more hands' model*

For Santander, one of Itera's customers, for example, in 2016 only 17% of people were working in the projects, others were extension of the teams. In 2019 this percent increased to 60% (based on analysis of headcount and revenue)

Increased level of digital knowledge and focus on speed to market (i.e. DevOps). With move to mobile and by providing self-service to its end-users, our Customers want to release new features faster.

The recent mobile projects for Islandsbanki (largest Icelandic customer of Itera) illustrate this trend.

2) *Lack of talents to enable digitalization (especially in public sector)*

Shortage of IT skills will reach 4% of total IT workforce in 2022, and will have massive impact on the ability to carry out projects, resulting in loss of revenues and efficiency in excess of €7B by 2020 (see Figure 4.5). [9]

IT Service Providers will have to realize that competition for skills comes also from other industries. A strategy for acquisition, retention and development of talent, skills and competence will become key to success. IT workers will need to prepare for several career and technology shifts in a lifetime. [9]

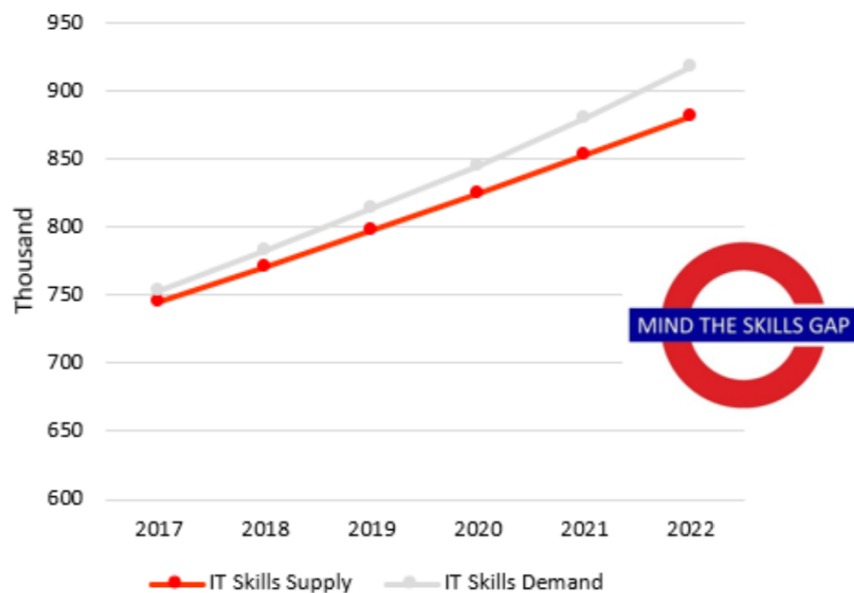


Figure 4.5 IT workers trend in Nordics 2019 Nordic Digital Insights Report

Big brands coming to IT market for resources, like Volvo, Equinor etc., who have to hire 100-200 it specialists within 12 months, hit the local market.

Public sector have shown a reluctant attitude towards any "sourcing" from other countries. Concerns that are often expressed are difference in language, culture and

about security in general. In some cases, time zones and long travel times are also a relevant issue.

3) *Focus on innovation and fail fast changing the consultancy role*

Our sales observe that Customers no more what to start big waterfall projects, do heavy planning at early stages of project lifecycle, when uncertainty is quite high. Instead, they are more eager to start several concurrent small initiatives and see what is working. This changes the competencies the consultant should possess, making more focus on project coordination, knowledge of new models, like lean start-up and LESS.

4.2 Itera Strategy

For years major focus of Itera was hosting Customer applications and solutions and get revenue from subscription. Itera development units developed solutions and then handed it off to operations team to maintain and support. Itera has its own infrastructure and set of servers to host these applications. However, trend of moving all infrastructure to cloud forced Itera to change its strategy and adapt to changing environment.

The survey from Deloitte shows [5] that cloud is now an integral part of many organizations business and technology strategies. Nearly all (93%) of survey respondents report that their organizations are considering, or have already adopted, cloud services. Their primary reasons for adopting cloud are shown on the Figure 4.6 below.

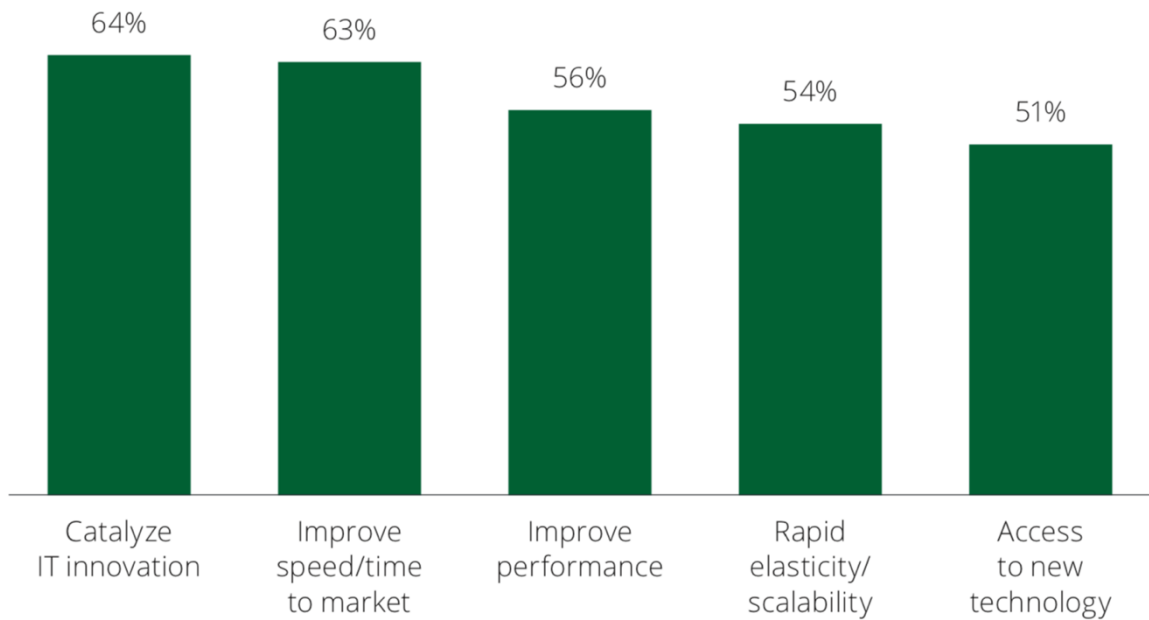


Figure 4.6 Primary reasons of adopting cloud in organizations from Deloitte survey

Itera started losing Customers who wanted to receive full-chain services, from development to migrating their on-premise solutions to cloud and consulting on cloud setup and options. Besides hosting production in cloud, cloud platforms provide additional services and tools for development teams.

Customers also show the trend of decreasing number of different vendors to several key ones, and Itera needed to change their services portfolio to fit.

Overall, Itera’s focus is to move from serving as cost-saving IT to value-added services.

“Platforms today power learning and innovation at the speed of business by providing collaborative and sometimes exponentially productive spaces for value creation,” – says Peter Schwartz, senior vice president for strategic planning at Salesforce. Itera sees its potential in working with platforms. Platforms have grabbed unprecedented attention in the digital era. The deeper reason that platforms have lately captured so many business leaders’ imaginations is that they enable the “pull-based” approaches which have long been seen as the future of serving customers profitably. Platforms help to make resources and participants more accessible to each other on an as-needed basis. Properly

designed, they can become powerful catalysts for rich ecosystems of resources and participants. An implication for management teams of the rise of platforms is that, in their work to devise strategies for future success, they should explicitly consider what their “platform plays” will be. Some will identify useful platforms that have yet to be established and choose whether to create those unilaterally or by forming consortia. All should survey the platforms arising in their markets and consider the degree to which they will be active participants in them.[11]

As we see management teams addressing such questions today, the strategic choices they make are based on the four major kinds of benefits they expect to gain from platforms. Depending on the relative emphasis they place on performance improvement, leveraged growth, distributed innovation, and shaping strategies, they gravitate toward some platform opportunities more than others. [11]

The global Itera strategy achieves it in three phases:

1) Phase 1. Platforms first

- Build next generation applications on platforms
- Experiment with disruptive technologies
- Build technical foundation: all new projects on cloud platforms (customer focus) & training and certification programs for all consultants (employee focus)

2) Phase 2. Data-driven business

- Create AI and data competence center with unlimited access to data scientists for strategic customers
- Cloud native service delivery and operations
- Industry specific initiatives

3) Phase 3. Alternative business models

- Prescriptive analytics
- Businesses buy and sell data
- Provide short time to value for our customers

So, in 2019 we start with 'Platforms first' focus. In order to guarantee the quality of the service, Itera understands that having only team of infrastructure or devOps engineers is not enough. The cloud platform knowledge should be incorporated on all levels in the organization: from sales and key account managers to developers and test engineers.

Also, need in resources Nordic countries is getting high. To solve it most of the companies opened their delivery centers or outsource the work. However, classical outsourcing provides great overhead on Customer to manage the team sitting miles away, with 5-8 hours time difference and with another culture.

Itera solved this challenge by staffing hybrid teams, where some key resources are sitting in Customer office, understand Customer needs and speak his language, at the same time supporting the team in another location.

Scaling the nearshore is also part of Itera Strategy. We made a long way of changes in the organization to make everyone understand the focus on Nearshore.

Today we have about 500 employees in total in Itera, with NS taking 45%. The goal is to grow NS to 60% by 2022. The people working in both Onshore and Nearshore organization have to be skilled in working with distributed multi-cultural teams.

4.3 My recommendations on technological development for Itera

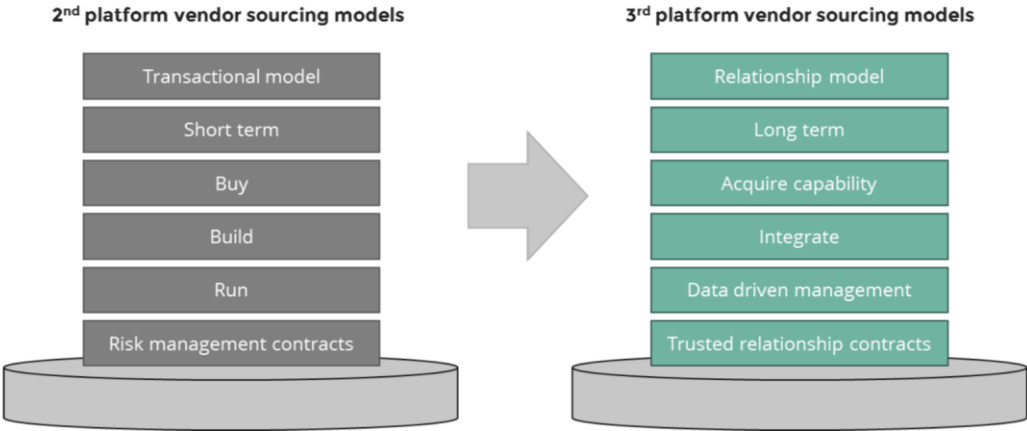
The Nordic market is driven by the same tech trends as the global world, but the different macro forces create individual stories. Digitalization is on the agenda of all Nordic businesses and this is one of the main growth drivers of the IT services market. Cloud and data centers are changing the face of the private, public sector, as well as of the entire economy. Still, all the tech innovation comes with IT security luggage.

By analyzing all research on Nordics market and by seeing some of the trends by myself (being a part of pre-sale process), I can predict that Itera as a company should speed up in building cloud solutions competence as well as focus on AI and ML, as a first step. Today big organizations, who are main customers of Itera, are experimenting with

AI and ML, and very soon they will need the partner who can guide them through this digital transformation. All this cannot be done without moving all the infrastructures into cloud that provides powerful instruments of working with data.

Also, Nordics market has a high labor force utilization. Due to lack of resources, any AI and Robotics projects have higher chances to get financing and investment. In addition, new delivery models should be found to overcome the overall IT resources shortage on the Nordics market. Doing pure outsourcing doesn't seem an option for most of the companies, as they want to build relationships with vendors and fully integrate them to achieve best results (see Figure 4.7). It's not about outsourcing maintenance work anymore. This requires new skills from IT specialists, besides tech knowledge.

The 3rd platform requires a different sourcing model



Sources: IDC, Beringer Finance

Figure 4.7 Changes in sourcing models

Taking into consideration key technology and business trends listed above and company strategy, my recommendation will be to focus on the following technologies and delivery models to meet changing customer needs and market trends:

1) Cloud platforms

By analyzing top 10 largest Idera Customers, we set the following priorities for cloud competence: Microsoft Azure, Google Cloud, AWS.

2) ML/Deep Learning

To support Phase 2 ‘Data-driven business’ of Itera strategy, AI and ML competence should be built in Itera. This enables us both to help our customers in Finance to secure their services by developing more sophisticated risk management and fraud analysis models as well as do a first step towards smart domain in utility sector by analyzing all that data coming from IoT devices.

3) DevOps and DevSecOps

Businesses want to receive fast feedbacks from their users, users become more impatient to releases of new features and bug fixes. So, development processes should become even more flexible to win this race.

DevOps lifecycle enables continuous delivery and innovation while guarantying information security with DevSecOps processes.

4) Transform from cost-effective outsourcing to value-driven model

To deliver added value to the end customer, we need to have responsibility on the full software development lifecycle, not just development or operational part of it. In such a model having people with just technical expertise is not enough. People need to have strong communication skills, wide business understanding and domain knowledge as well as be able to work in multi-cultural teams. All these skills are boosted with 3D model. In addition, different delivery models can be mapped to the 3D competence model (see Figure 4.8). Itera wants to switch focus from CV-selling and Projects to more Hybrid and Consulting models.

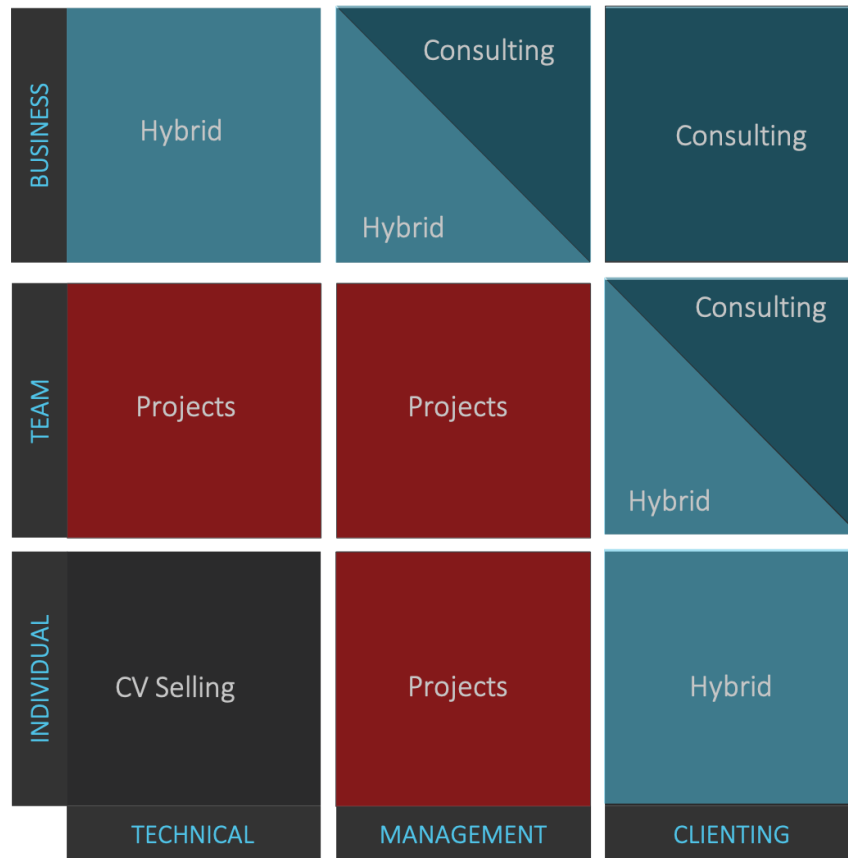


Figure 4.8 Mapping of delivery models to 3D model

4.4 3D model calculation for Itera

Implementation of 3D model starts from Itera Hybrid Business Unit (Ukraine and Slovakia offices) and will gradually roll out to be implemented for the whole company. All competence development activities should eventually find their place in 3D model and be managed with the project-based approach.

For 2019, the following projects were selected based on company strategy and internal company goals:

- 1) Getting knowledge and skills in new technologies
 - **Cloud platforms:** Microsoft Azure, Google Cloud, AWS.

- **AI and Machine Learning:** get skills of AI capabilities in cloud platforms and understand how we can solve particular business tasks with AI in finance and utility sectors
- **DevOps and DevSecOps:** incorporate DevOps and security practices into all stages of software development

2) Preparing for growth

- **Leadership skills:** the company plans are to increase in headcount in 2019 and further, and Itera needs to prepare next generation of managers and leaders (Project Managers, Department Managers and team/group leads)
- **Cross-culture competence for newcomers:** for all newcomers Itera organizes special trainings on cultural differences between our and Scandinavia culture, thus making sure people will understand the specifics of working in the distributed team and Scandinavia context
- **Strategic Kitchen:** program for middle managers based on Itera's business cases from the past and present, both of operational and strategic nature. In this way middle managers can get insight of decision making processes in the company as well as learn how to introduce changes and build strategy.

3) Internal HBU/People Office goals

- **Improve level of English:** for all our people level of English is very important skill that we evaluate at every performance appraisal (evaluation). It's getting even more critical for Senior positions, as we have small teams (up to 8 people) where everyone should be able to communicate with Customer directly. So, the goal for 2019 is to make sure that at the end of the year 80% of our Senior personnel will have upper-intermediate (B2) level of English. This is done in addition to regular language classes offered by company.
- **Itera MAD Night:** semiannual events where the company gathers to speak on some global trends, spread breakthrough ideas and get some inspiration.

4) Ongoing internal competence development activities

- **Maintenance of existing tech and management competence:** besides getting knowledge in new technologies, we need to make sure that our employees are on the edge with news and trends in the area they are working daily. So, yearly we plan to pass professional certifications and attend professional events (trainings, conferences) to keep the people up to date with changes that happen in the world of technology.
- **Language classes:** the company offers to all employees regular English and Norwegian classes to improve their knowledge of languages.
- **Management education:** some education seminars and events for top-managers to close existing gaps and grasp business trends happening in the world. The activities include trainings on facilitation, business education (MBA, Executive MBA), attending international conferences on business, outsourcing (SSON) or HR-related topics.

All the calculations below will focus on these projects. For each of the projects planned for 2019, we define focus groups. It means that we need to map projects to the competencies that they develop or improve. Figure 4.9 shows projects mapped to the 3D model.

BUSINESS	<ul style="list-style-type: none"> • Cloud platforms • AI and ML • DevOps and DevSecOps • MAD Night 	<ul style="list-style-type: none"> • DevOps and DevSecOps • Leadership program • Strategic Kitchen • Management education 	<ul style="list-style-type: none"> • Strategic Kitchen • Management education
TEAM	<ul style="list-style-type: none"> • Cloud platforms • AI and ML • DevOps and DevSecOps 	<ul style="list-style-type: none"> • Cloud platforms • AI and ML • DevOps and DevSecOps • Leadership program • Maintenance of existing management competence 	<ul style="list-style-type: none"> • Cloud platforms • AI and ML • DevOps and DevSecOps
INDIVIDUAL	<ul style="list-style-type: none"> • Cloud platforms • AI and ML • DevOps and DevSecOps • Maintenance of existing tech competence 	<ul style="list-style-type: none"> • Leadership program • Maintenance of existing management competence 	<ul style="list-style-type: none"> • Cloud platforms • AI and ML • Cross-culture competence • Improve level of English • Language courses
	TECHNICAL	MANAGEMENT	CLIENTING

Figure 4.9 Competence development projects represented in 3D model

Step 1. Define input parameters

In Itera while planning revenue, Business Development Office create several scenarios of growth. It is stated that company can be managed and operated in current mode, if one of the three scenarios takes place (see Figure 4.10).

We assume that if the growth is more than 30% or drop is more than 5% then company needs to switch to another management model in all its processes, like revenue planning, resource planning etc.

For 2019, the three growth scenarios for Itera HBU (see Figure 4.11 below) are created. As a working scenario, we take moderate growth scenario with headcount of 275 people total, and 242 people in billable personnel.

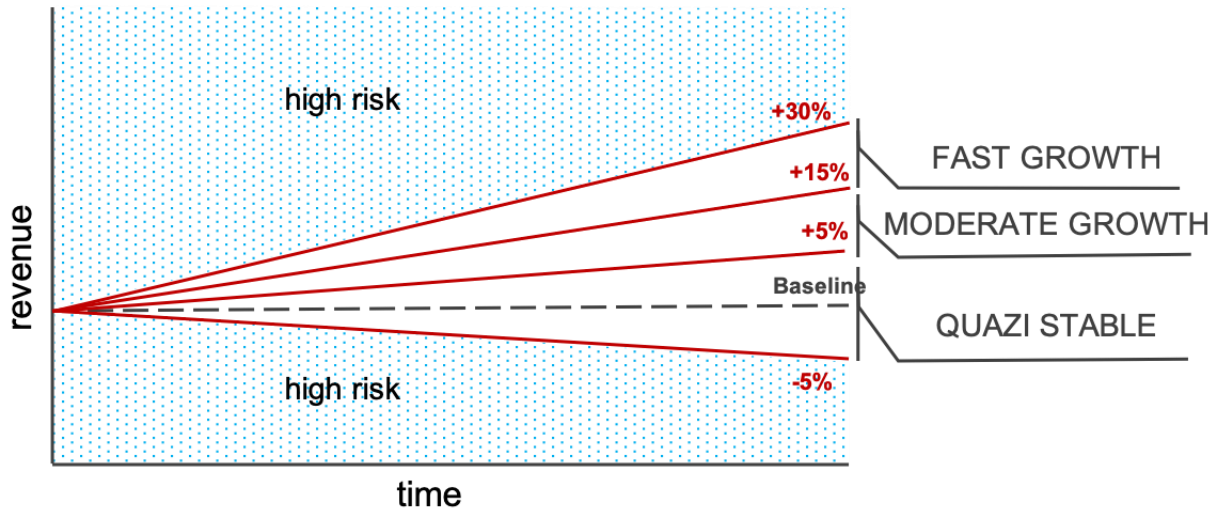


Figure 4.10 Growth scenarios description

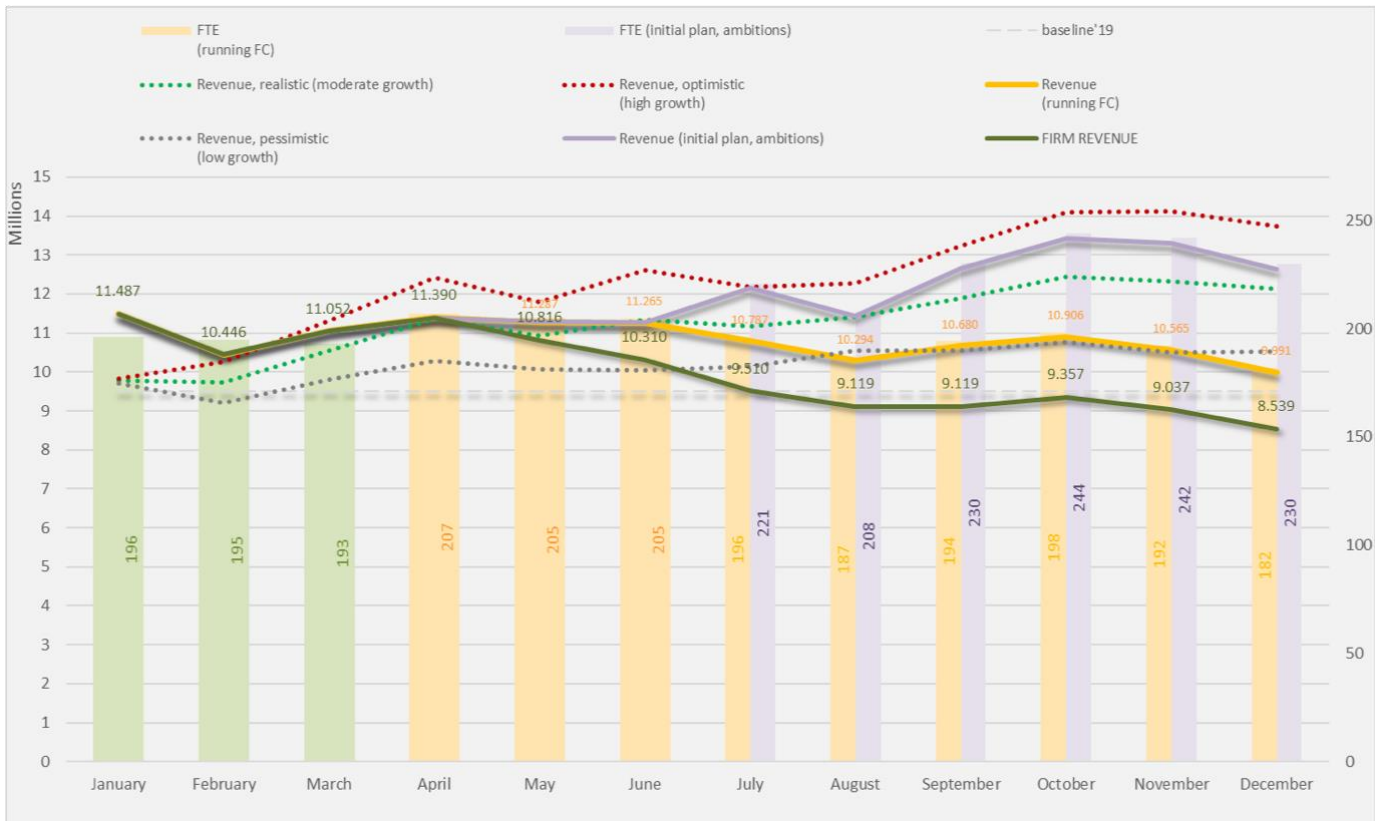


Figure 4.11. 2019 FTE and revenue forecast for Itera

The details of headcount calculation are presented in the tables below.

Departments	TODAY		EXPECTED (DEC 19)	
	UA	SK	UA	SK
BILLABLE PERSONNEL	144	49	179	63
PMO	6	2	8	3
TC	72	21	93	27
QA	34	8	41	10
MS	28	18	32	23
FIN	4	0	5	0
TOTAL PERSONNEL	166	56	203	72
HR	5	3	5	4
BizDev	5	0	5	0
Finance	5	0	5	0
Resource management	3	2	5	3
G&A	4	2	4	2
	222		275	

DELTA	UA	SK	
Billable personnel	57	21	Attrition rate 15%
Total personnel	62	24	

To calculate headcount growth in absolute numbers, we need to take attrition in consideration. For our calculations for 2019 we take attrition rate as 15%, based on historical data that we have.

Step 2-3-4. Calculating total FTEs, cost of learning product and total budget for each project

For each project, I will calculate required number of competencies. I will provide detailed calculations and description for the first project. Other projects are calculated with the same routine; however, I will provide only summary for each project.

Project ‘Cloud platforms’

Project goal

The first step in moving towards company strategy is to get proper competence on Cloud platforms on all levels of organization. It includes educating tech consultants in cloud specifics, as well as project managers on how to manage cloud projects, sales managers on what typical business cases cloud platforms can solve etc. Based on Nordics market analysis, the following cloud platforms will be covered (in order of priorities): Microsoft Azure, Google Cloud, AWS.

Figure 4.12 shows activities are planned on each level of the 3D model

INDIVIDUAL	ACTIVITIES: <ul style="list-style-type: none"> Microsoft Azure certification Google Cloud certification AWS certification Courses on Pluralsight Sandbox environments to practice skills 	ACTIVITIES: <ul style="list-style-type: none"> Cloud architect certifications Conference on cloud platforms Sandbox environment to practice skills 	ACTIVITIES: <ul style="list-style-type: none"> International conference on cloud trends from Microsoft, Google or AWS
	ACTIVITIES: <ul style="list-style-type: none"> Cloud platforms ‘how tos’ Internal seminars for sales on typical cases for cloud Q&A sessions 	ACTIVITIES: <ul style="list-style-type: none"> Cloud platforms ‘how tos’ Internal seminar to go through main toolset and terms in cloud 	ACTIVITIES: <ul style="list-style-type: none"> Cloud platforms ‘how tos’ Conference on cloud platforms
	TECHNICAL	MANAGEMENT	CLIENTING

Figure 4.12 Activities for Cloud platforms project mapped to 3D model

Most of the Customers from Itera HBU are have limited projects with Cloud platforms. However, top 3 largest customers planned to start projects with Azure cloud this year. So, we assume that Itera will get 4-6 projects from existing Customers with Cloud technologies in 2019. 2-3 more projects are planned from new Customers.

Considering that Itera traditionally starts with small teams (up to 5 people) and then extend, we can assume how many people we need to educate with Cloud technology to meet the needs this year and prognoses for next year (see Figure 4.13).



Figure 4.13 Total number of FTEs to be educated in cloud platforms

Deliverables of the project include:

- Certified developers, operations specialists and devOps engineers
- Educated test specialists (manual and TA)
- Certified cloud architects and tech leads
- Project managers who knows main cloud tasks to be solved as well as toolset
- Sales managers who understand typical cases within cloud
- Subject matter experts who are able to implement cloud solutions in particular domain

Based on the specified deliverables and activities, I define the cost of external learning product as well as cost of internal hours spent on getting competence in cloud platforms.

PARAMETERS	INDIVIDUAL- TECHNICAL	INDIVIDUAL - MANAGEMENT	INDIVIDUAL - CLIENTING	TEAM - TECHNICAL	TEAM - MANAGEMENT	TEAM - CLIENTING	BUSINESS - TECHNICAL	BUSINESS - MANAGEMENT	BUSINESS - CLIENTING
Total FTE	35	--	19	7	3	3	15	--	--
FTE, UA (80%)	28		15	5	2	2	12		
FTE, SK (20%)	7		4	2	1	1	3		
External cost, UA	\$250		\$250	\$200	\$40	\$40	\$2,000		
External cost, SK	\$400		\$250	\$250	\$40	\$40	\$2,000		
Internal cost, UA	\$304		\$1,216	\$608	\$380	\$532	\$608		
Internal cost, SK	\$424		\$1,694	\$847	\$529	\$741	\$847		
Internal time, hrs	8		32	16	10	14	16		
# of products	2.2		1	1	1	0.5	0.5		
Internal cost per hour, UA	\$38								
Internal cost per hour, SK	\$53								

As a final step, I calculate total budget that covers cost of external activities as well as cost of internal hours. Total budget is estimated to be **USD 42,990**.

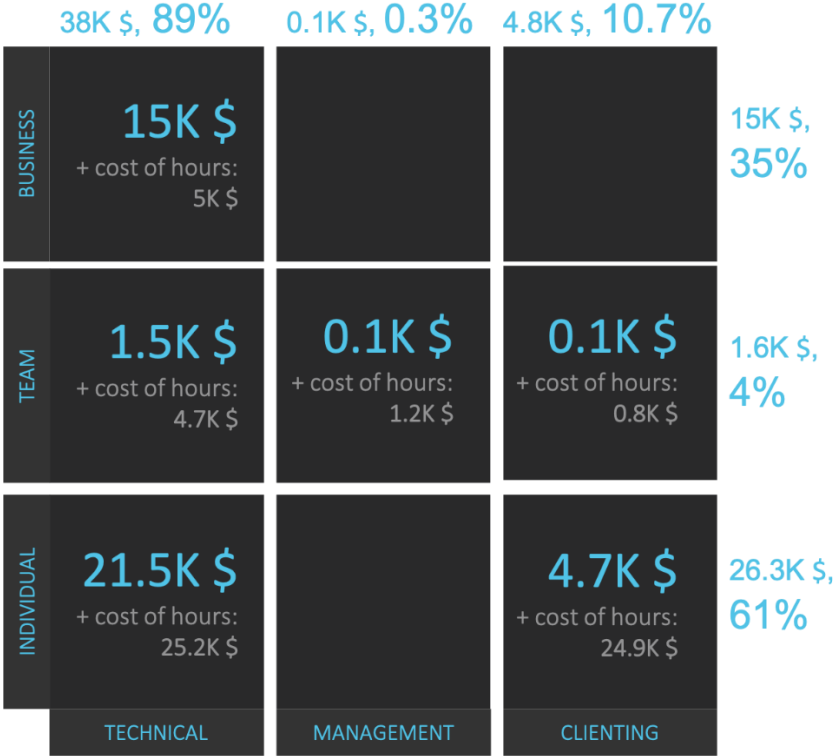


Figure 4.14 Total budget for Cloud platforms project

Using the same approach, planning for all other projects from the list for 2019 is done. Details on each project can be found in Annex A.

Step 6. Total number competencies and budgets

By combining all the projects together, I’ve received the following number of competencies in each level of 3D model (Figure 4.15) and total budget for competence development (Figure 4.16).



Figure 4.15 Total number of competencies for all projects



Figure 4.16 Total budget for competence development

Budget governance overview

The model provides clear governance structure on what money are spent and who is the final approver of the budget (see Figure 4.17).

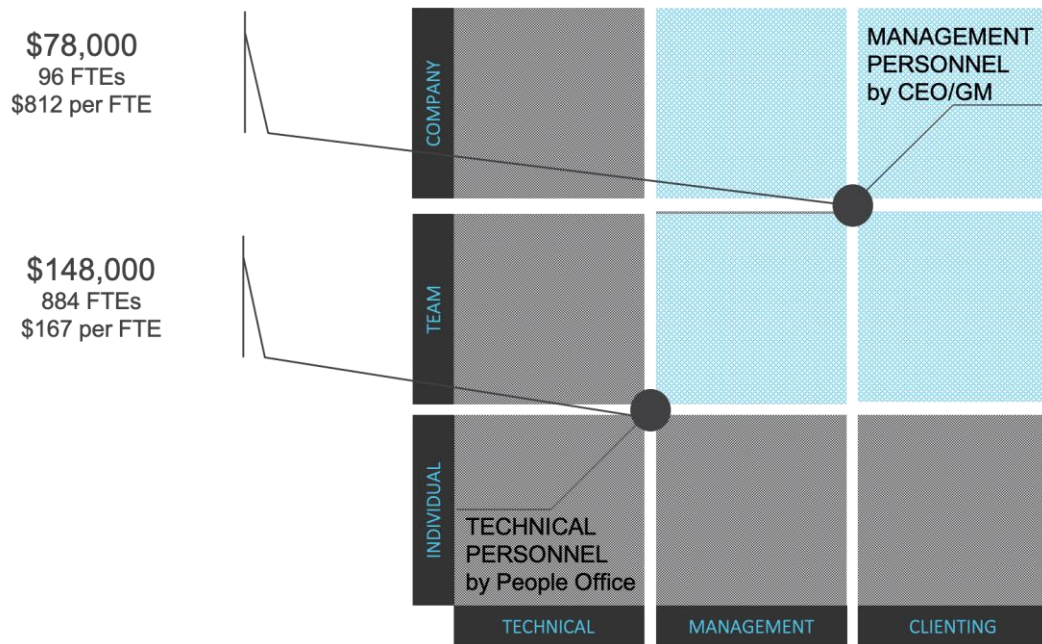


Figure 4.17 Budget governance structure

4.5 Operational routine

The routine of using the model will be the following:

- 1) At the end of the year, once the revenue forecast is prepared for the next year and strategical plans are finalized, the Head of People Office prepares the budget by following the steps described above. People Office also identifies their targets and how the result will be measured.
- 2) Head of People Office prepares three different models, one per each growth scenario, so company can easily switch to another model if growth scenario changes
- 3) Once total budgets are calculated, the budget for department and location is defined based on the % of headcount in each department.
- 4) Resource managers then split the budget for concrete activities: trainings, courses, certifications, conferences etc.
- 5) At the end of every month, Resource Managers, HRs track factual expenses.
- 6) Each quarter management group gathers to analyze the results of the quarter and define whether the specified growth scenario is still relevant, or we should switch to another one and adjust the 3D model and budget calculation.
- 7) At the end of the year, management tracks whether planned targets are met.

CONCLUSIONS

It took me a while before I picked the topic for my master thesis, because I wanted to do something that will really be used in my company. My role in the company states on the edge between technology and people and I think it provides me an advantage to understand both aspects. However, I truly believe that new disruptive technologies come and go, and the business should learn how to develop people who can work with new technologies, changing context and business challenges.

With years working close with Customers, I see how changes Nordics markets, and what Customer pains and challenges come on the stage.

Today digital transformation is the key challenge for most businesses where IT was a cost-center before. Businesses understand that such technologies as clouds, AI and ML, Robotics and approaches, like DevOps, can help them to deliver value faster and with higher quality to end users.

And, as a next step, toolset provided by clouds and other platforms will change the daily work of developer. Instead of creating low-level code, he will work on building solutions from pre-developed blocks provided by platforms and work towards integrating them. To be successful in this completely new kind of jobs, engineers need to increase their business and domain knowledge, problem-solving skills, understand the trends and economy of business and many more.

Itera is at the beginning of its way to transformation on all levels: services we provide, competencies we built, structures we work in. Now it is extremely important to have right people on board, who support and understand this transformation and can drive it. I consider myself such kind of a leader for my company.

3D model represents another view on standard HR competencies. However, it goes further and serves as a tool to combine company strategy, values and concrete goals into one view. The main distinction of the 3D model is a switch from cost-saving objectives to long- term value benefits built.

This model provides unique benefits for the top management that current approaches to competence can't solve, i.e.:

- it is easy to adapt required competencies and their number to company growth pace and react to changes flexibly, especially in highly distributed organization
- effective usage of competence development resources and budgets, common approach to planning
- clear understanding on how much it costs to move a person from one level of 3D model to another. By digitalizing this information, company can make management decisions whether it want to grow people internally or hire them from the market
- it combines strategic focus on management competence development (2+ years perspective) with tactical technical competence development (4+ months perspective) and allows making decisions on better usage of resources and money

I don't have an answer today whether the model will work or not, but one of the things that I've learned during the study at MSTM is 'Fail Fast'. Even if the model in its today representation will not suite Itera's needs, I can transform it into career roadmap for the employees, showing the skills required for each role.

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ANNEX A. DETAILED PROJECTS CALCULATIONS

1. Project ‘AI and ML’

To follow the defined technological strategy, the company will get competence in AI and Machine Learning. As many of Itera current and potential customers are just investigating the possibilities of using ML, it is recommended to roll out the competence gradually among the employees. The plan is to get 3 small pilots in AI in 2019 and participate in number of feasibility studies and pre-sale processes. For this purpose I see the following number of competencies to be acquired on each level of 3D model (see Figure A.1).

BUSINESS	8 UA: 6 SK: 2		
TEAM	3 UA: 2 SK: 1	3 UA: 2 SK: 1	4 UA: 3 SK: 1
INDIVIDUAL	8 UA: 6 SK: 2		7 UA: 6 SK: 1
	TECHNICAL	MANAGEMENT	CLIENTING

Figure A.1 Total number of FTEs to be educated in AI & ML

Total budget for getting these competencies is estimated to be **USD 17,800** for external learning products. Detailed budget per level is presented on the Figure A.2.

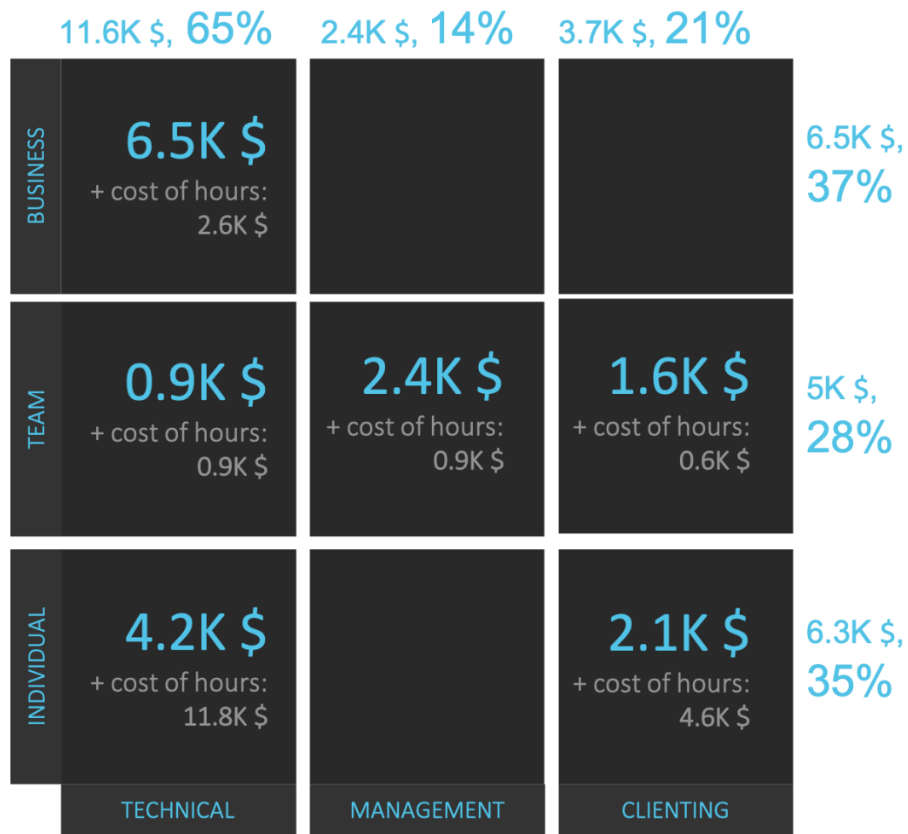


Figure A.2 Total budget for AI & ML project

2. Project ‘DevOps and DevSecOps’

The project goal is to embrace devops and devsecops processes into all current projects. Company has already developed some technical competence in devops and have a team of several devops engineers sitting in UA, and as a next step, we need to educate developers, tech leads and test engineers to work in devops lifecycle. In addition, devsecops competence should be build.

The number of competencies per each level in 3D model is presented in the Figure A.3.

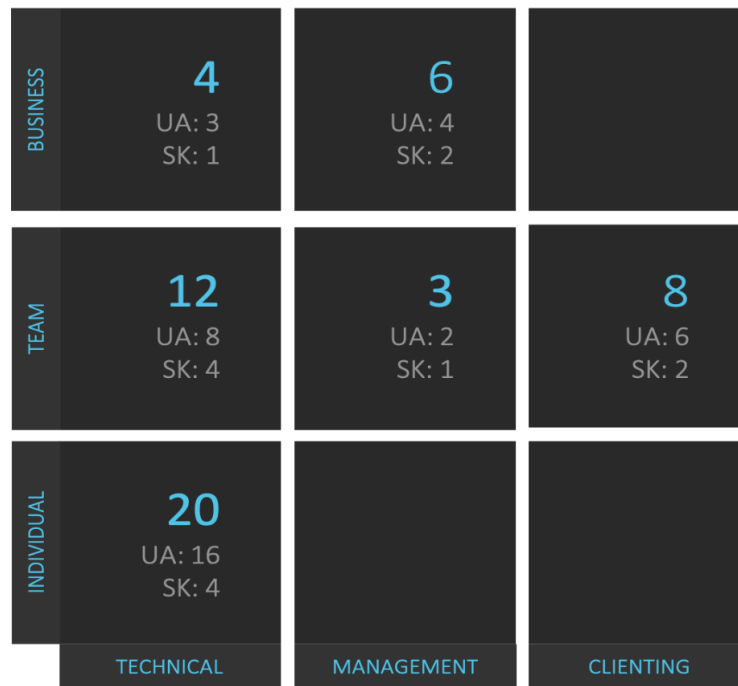


Figure A.3 Total number of FTEs to be educated in DevOps and DevSecOps

Total budget for getting these competencies is estimated to be **USD 30,700** for external learning products. Detailed budget per level is presented on the Figure A.4.



Figure A.4 Total budget for DevOps and DevSecOps project

3. Project ‘Leadership program’

The company plans are to increase in headcount in 2019 and further, and Itera needs to prepare next generation of middle managers and leaders (Project Managers, Department Managers and team/group leads). To achieve it, there was initiated leadership program in UA office. I estimate that SK office has enough management potential to support growth in 2019-2020, however company needs to increase the potential in UA.

There were selected 16 people from UA office in core group, and several people from UA and SK for extended group for some fragmented modules.

The number of competencies per each level in 3D model is presented in the Figure A.5.



Figure A.5 Total number of FTEs to be educated in leadership

Total budget for getting these competencies is estimated to be **USD 17,400** for external learning products. Detailed budget per level is presented on the Figure A.6.



Figure A.6 Total budget for Leadership project

4. Project ‘Cross-culture competence’

In Itera we work in distributed teams with different locations and cultures. So, as part of required training for all newcomers we have training on cross-culture difference. To estimate it for 2019, I’ve calculated preliminary number of new hires. The number of competencies per each level in 3D model is presented in the Figure A.7.



Figure A.7 Total number of FTEs to be educated in cross-culture competence

Total budget for getting these competencies is estimated to be **USD 0** for external learning products, because all the activities will be taken internally. Detailed budget per level is presented on the Figure A.8.

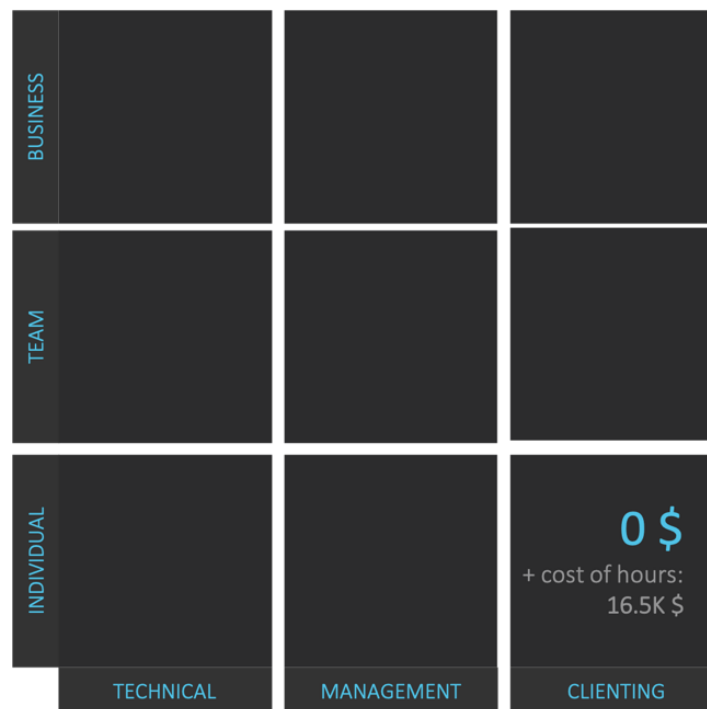


Figure A.8 Total budget for cross-culture competence project

5. Project ‘Strategic Kitchen’

Strategic Kitchen is the program for middle managers based on Itera’s business cases from the past and present, both of operational and strategic nature. In this way middle managers can get insight of decision making processes in the company as well as learn how to introduce changes and build strategy.

The number of competencies per each level in 3D model is presented in the Figure A.9.



Figure A.9 Total number of FTEs to participate in Strategic Kitchen

Total budget for getting these competencies is estimated to be **USD 3,600** for external learning products. Detailed budget per level is presented on the Figure A.10.

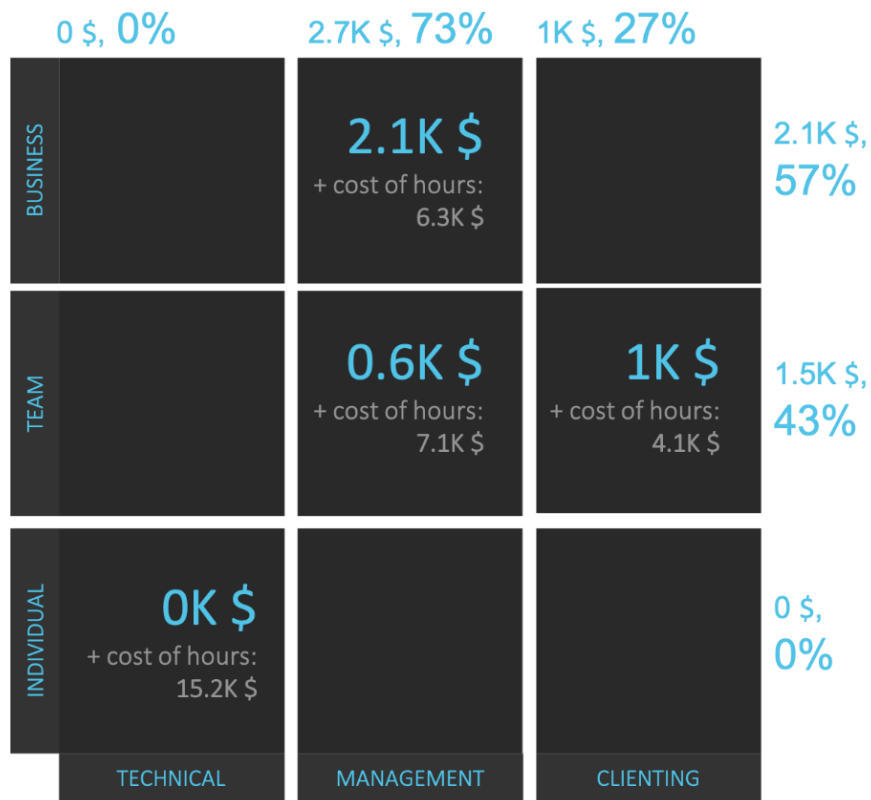


Figure A.10 Total budget for Strategic Kitchen project

6. Project ‘Language courses’

Itera supports the language classes in all its locations. For UA there are English and Norwegian classes for employees. In SK office there are English and Slovak classes (for relocated people from UA). The classes are conducted on regular basis.

The number of competencies per each level in 3D model is presented in the Figure A.11.

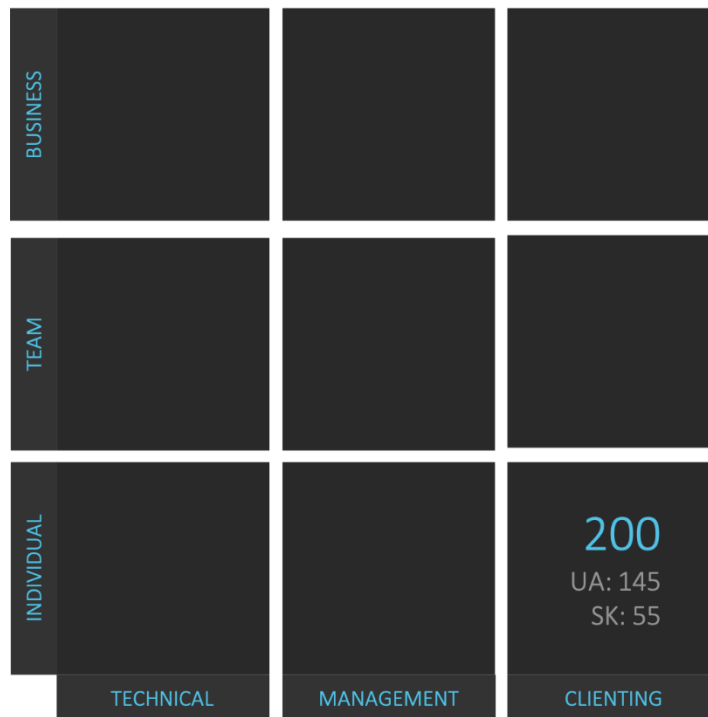


Figure A.11 Total number of FTEs participate in Language courses

Total budget for getting these competencies is estimated to be **USD 25,000** for external learning products. Detailed budget per level is presented on the Figure A.12.

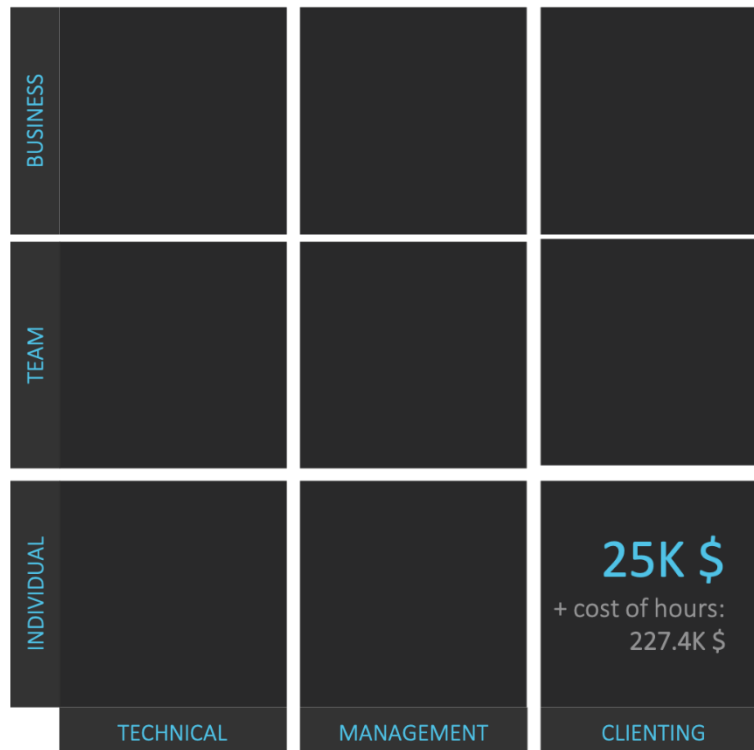


Figure A.12 Total budget for Language courses project

7. Project ‘Itera MAD Night’

Itera ‘Make a difference’ (MAD) Night is the semiannual events where the company gathers to speak on some global trends, spread breakthrough ideas and get some inspiration. This program is part of ONE Itera initiatives that is done cross all offices in all locations.

The number of competencies per each level in 3D model is presented in the Figure A.13.



Figure A.13 Total number of FTEs to participate in Itera MAD Night

Total budget for getting these competencies is estimated to be **USD 12,000** for external learning products. Detailed budget per level is presented on the Figure A.14.

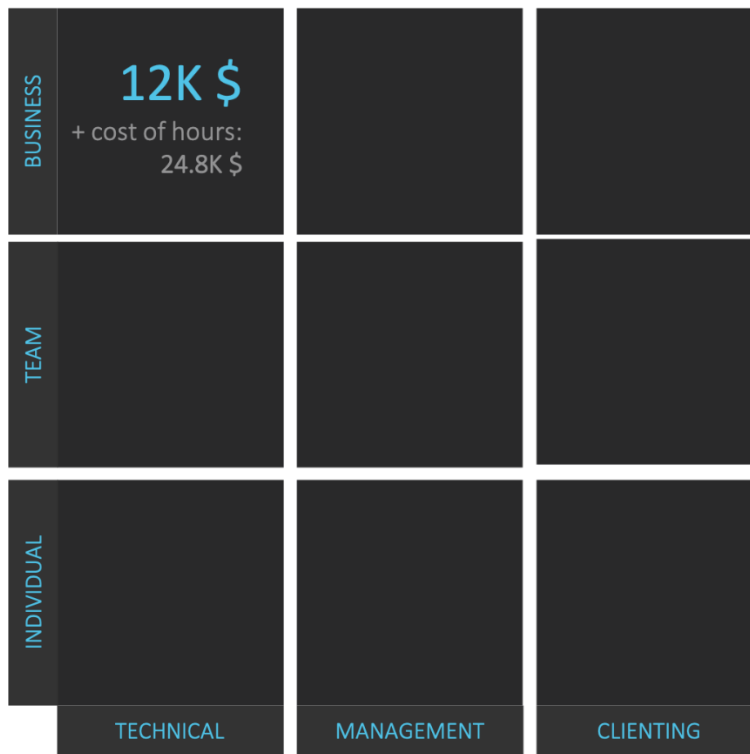


Figure A.14 Total budget for Itera MAD Night project

8. Project ‘Maintenance of current level of tech competence’

Besides getting knowledge in new technologies, we need to make sure that our employees are on the edge with news and trends in the area they are working daily. So, yearly company plans to pass professional certifications and attend professional events (trainings, conferences) to keep the people up to date with changes that happen in the world of technology. Company also sees it as retention issue for some employees.

The number of competencies per each level in 3D model is presented in the Figure A.15.



Figure A.15 Total number of FTEs to be regularly educated in technology

Total budget for getting these competencies is estimated to be **USD 30,500** for external learning products. Detailed budget per level is presented on the Figure A.16.

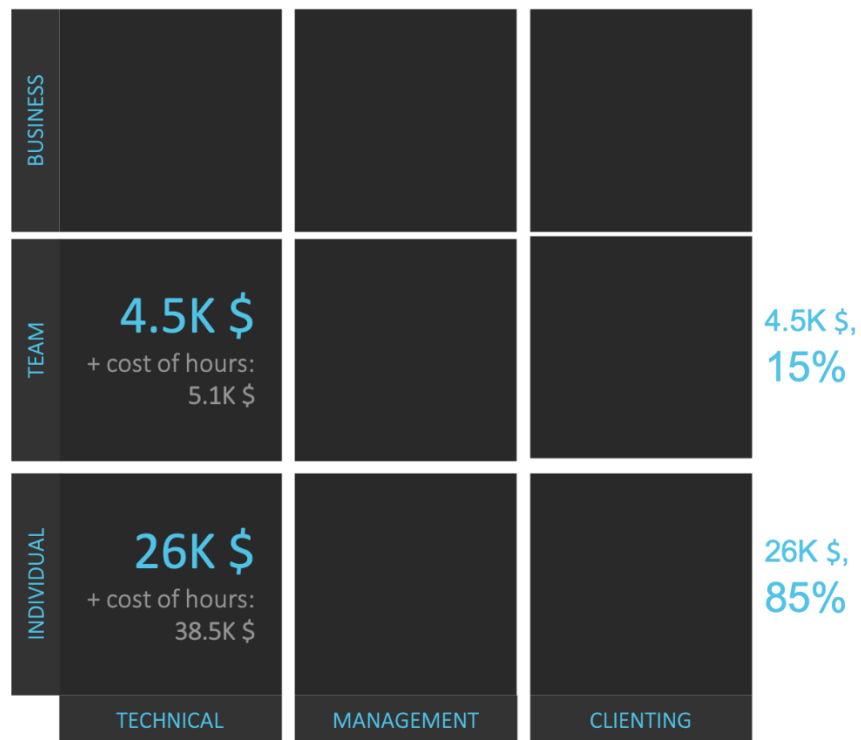


Figure A.16 Total budget for maintaining current tech competence

9. Project ‘Maintenance of current level of management competence’

For Project Managers there are also some ongoing events to be done, like PM conferences, certifications, courses.

The number of competencies per each level in 3D model is presented in the Figure A.17.

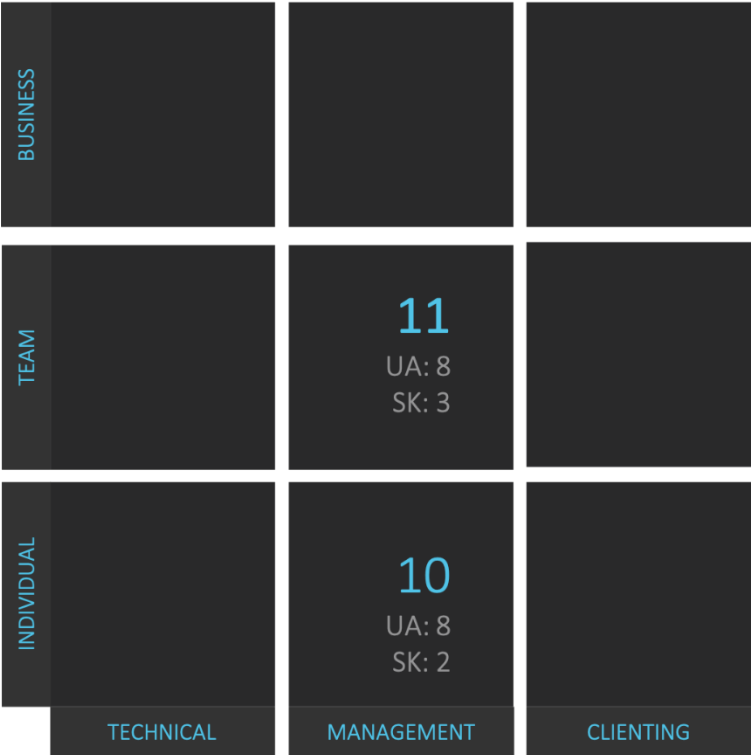


Figure A.17 Total number of FTEs to be regularly educated in management

Total budget for getting these competencies is estimated to be **USD 14,700** for external learning products. Detailed budget per level is presented on the Figure A.18.

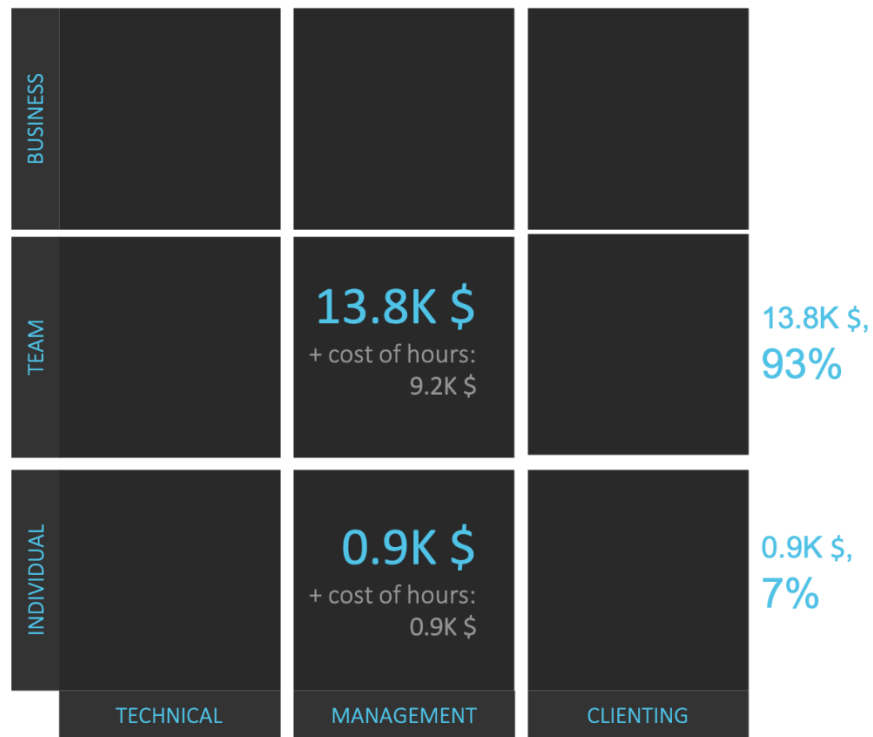


Figure A.18 Total budget for maintaining current management competence

10. Project ‘Management education’

There are planned some education seminars and events for top-managers to close existing gaps and grasp business trends happening in the world. The activities include trainings on facilitation, business education (MBA, Executive MBA), attending international conferences on business, outsourcing (SSON) or HR-related topics.

The number of competencies per each level in 3D model is presented in the Figure A.19.

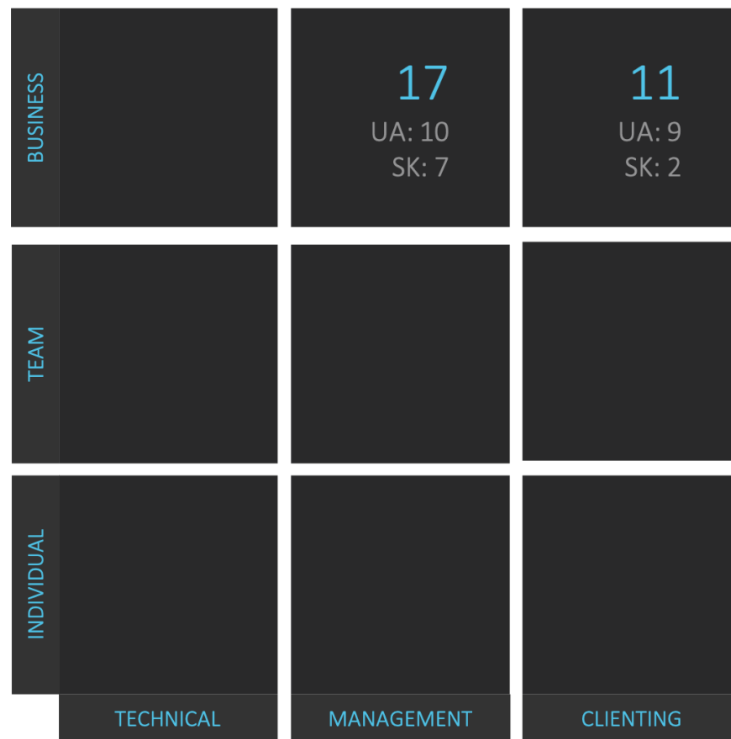


Figure A.19 Total number of FTEs to participate in Management education

Total budget for getting these competencies is estimated to be **USD 31,300** for external learning products. Detailed budget per level is presented on the Figure A.20.

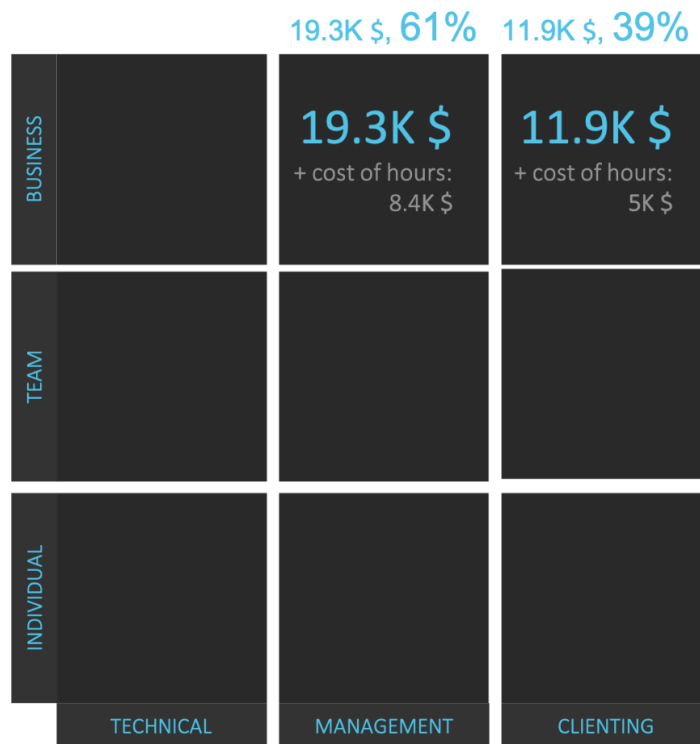


Figure A.20 Total budget for Management education