

Practice I: "Professionalism"

Surname, First name:	1.-Fernández Alfonso, Jorge 2.-Zaragoza Portolés, Miguel 3.-Constantin Birdici, Daniel 4.-Díaz-Alejo León, Stéphane
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Please, answer the following questions and **justify the answers too**.
(0,75 points) (Use the website <http://www.ecompetences.eu/>)

a) Identify the profiles of dimension 1 (C) showed on **Dilbert's company**. And explain the profiles. At least 2 profiles (C1-C4).

When we consider the C e-CF area in Dimension 1, we can easily see that it encompasses 4 e-Competences, which stand for dimension 2 profiles. These are:

- C.1. User Support
- C.2. Change Support
- C.3. Service Delivery
- C.4. Problem Management

When one comes to ponder on how Dilbert's company is reflected in these items, the ones that we can see the most in the episode are **Change Support** and **Problem Management**.

Regarding **Change Support (C.2)**, we can say most of the description in the document is true for Dilbert's company, especially the part that says that:

"Implements and guides the evolution of an ICT solution. Ensures efficient control and scheduling of software or hardware modifications to prevent multiple upgrades creating unpredictable outcomes."

Although, as most people would agree, it could have been done more efficiently. The implementation and evolution of the ICT solution Dilbert is part of could be improved if more flexible company-wide policies were adopted, allowing employees to implement and test solutions without fear of being wrong. This resembles more the attitude adopted by NIRVANA co., which as the second part of this report will dwell upon, is significantly more successful than Dilbert's first company.

When it comes to dimension 3, we can identify Dilbert's old company with sublevel 2 the most because, according to the document:

"During change, acts systematically to respond to day by day operational needs and react to them..."

Which is exactly what the company does when it realizes its internal communications are compromised: it enforces tough security policies, thus responding to the day-to-day operational

needs of the company in moments of change. Once again, a lot of things could have been done better when taking this approach, so although we must admit that it is not the most implementation of sublevel 2 of this third dimension, we must also admit it belongs here nonetheless.

Last but not least, regarding dimension 4, the most important knowledge examples of this e-CF that are applicable to Dilbert's company are

- K2: the existing ICT application technical architecture
- K4: change management tools and techniques

K2 has been chosen because the existing ICT application technical architecture in Dilbert's first company is functional, that is, it makes money and allows the company to continue operating (even though it does not necessarily implement best practices).

K4 has been chosen because change management tools and techniques are essential to the operation of the company and, well, to implement efficient change support, which is what this section has argued for, the need for these tools and techniques is of utmost importance.

And, regarding, skills:

- S1: share functional and technical specifications with ICT teams in charge of the maintenance and evolution of ICT solutions
- S2: manage communications with ICT teams in charge of the maintenance and the evolution of information systems solutions

These have been chosen because, when we think of Dilbert's company, we think of an *old* IT company, that, although is able to implement and deliver solutions to its clients, these are not the best possible solutions, and best practices may not always be followed at this kind of company. We are able to confirm this fact later when Dilbert starts working for Nirvana: the technical and humanistic gap in technologies, resources and practices is enormous.

On the other side, when it comes to ***Problem Management (C.4)***, a phrase in the document resonates specially well with the reality shown on Dilbert's Episode:

"Identifies and resolves the root cause of incidents. Takes a proactive approach to avoidance or identification of root cause of ICT problems. (...) Optimises system or component performance."

This is clearly what Dilbert's boss was trying to do when it implements all those micromanagement and intrusive security measures to protect the intellectual property of the company. Most of us would agree that those measures were clearly wrong, but its overall approach was, indeed, that of this e-Competence: Problem management.

If we dig further into dimension 3 of this e-CF we can further confirm our hypothesis by reading phrases such as *"Records incidents cataloguing them by symptom and resolution."*

This leads us to catalogue the organization's Problem management policies as belonging to level 2 of dimension 3 of this e-Competence. A symptom-and-resolution approach was clearly taken when dealing with the information leaks (and its subsequent publication on newspapers) the company was suffering.

Moreover, by moving into Dimension 4, we can clearly identify knowledge examples applicable to this competence, especially:

- K3: the organisation's critical situation escalation procedures
- K4: the application and availability of diagnostic tools

K3 is very clearly shown in the episode: the organization's critical situation escalation procedures are those shown on the book Dogbert shows in this scene:



And, when it comes to K4, we can consider the consulting services of Dogbert himself as the diagnostic tool available to the company, which dictates the new security policies to be applied (based on "the book", according to Dogbert himself).

Once again, we can identify further examples of this e-Competence by referring to the Skills section of dimension 4.

- S2: identify potential critical component failures and act to mitigate effects of failure
- S3: conduct risk management audits and act to minimise exposure

We can think of the security policies implemented by the company as the action taken to mitigate potential effects of failure, which is why S2 has been chosen. Finally, although Dogbert himself is not performing an audit in the episode, we can clearly see his position as risk manager when he dictates these very same security policies -and the CEO values the advice enough as to abide by it-.

b) Identify the profiles of dimension 1 (D and E) showed on **NIRVANA**. And explain the profiles. Between 6-8 profiles D (D1-D12). At least 5-6 profiles E (E1-E9).

When we consider the D e-CF area in Dimension 1, we can easily see that it encompasses 12 e-Competences, which stand for dimension 2 profiles. These are:

- D.1. Information Security Strategy Development
- D.2. ICT Quality Strategy Development
- D.3. Education and Training Provision
- D.4. Purchasing
- D.5. Sales Proposal Development
- D.6. Channel Management
- D.7. Sales Management
- D.8. Contract Management
- D.9. Personnel Development
- D.10. Information and Knowledge Management
- D.11. Needs Identification
- D.12. Digital Marketing

When one comes to ponder on how Nirvana is reflected in these items, the ones that we can see the most in the episode or we can guess are:

- **Information Security Strategy Development**
- **ICT Quality Strategy Development**
- **Education and Training Provision**
- **Sales Management**
- **Personnel Development**
- **Information and Knowledge Management**
- **Needs Identification**
- **Digital Marketing**

Looking at **Information Security Strategy Development (D.1)**, we can say that just reading its description, remind us a modern company, specially this fragment:

“Defines and makes applicable a formal organisational strategy, scope and culture to maintain safety and security of information from external and internal threats.”

Thus, we can think that as Nirvana is modern e-Company, for sure it will have an information security strategy as Google or Facebook in order to protect their own data, the most valuable resource of our times.

Taking into account the dimension 3, we would say that as any ICT company must have the higher level in this competence, Nirvana should have it too, that is, level 5.

Regarding the dimension 4, we think that the most relevant knowledges that Nirvana might have are:

- K3: the information strategy of the organisation
- K4: possible security threats

This is, because building an information security strategy without knowing the current information strategy nor the possible security threats is almost impossible and inefficient.

And the most valuable skills are:

- S1: develop and critically analyse the company strategy for information security.
- S3: apply relevant standards, best practices and legal requirements for information security.
- S5: propose effective contingency measures

This is, since lacking these skills would descend the level of the e-competence, and as we have argued before, this competence must be at its maximum.

Regarding **ICT Quality Strategy Development (D.2)**, we might think that nowadays there are two types of strategies, low quality but with low prices and high quality but with high prices, but this falls apart when it comes to ICT companies as the high quality is the standard, that is why we reason that this profile must apply to Nirvana, particularly this fragment:

“Uses defined standards to formulate objectives for service management, product and process quality. Identifies ICT quality management accountability.”

Its dimension 3 proficiency level must be of level 5, since as we have said, the high quality is the standard, for example, nobody buys a computer that is going to break off in two years, that is why it must be at the higher level.

Considering dimension 4, we ponder that the most relevant knowledge that could be applied to Nirvana is:

- K2: the information strategy of the organisation

This is, because you have to well-known your information strategy in order to make a suitable ICT quality strategy as both are related.

And the most important skills are:

- S1: define an ICT quality policy to meet the organisation’s standards of performance and customer satisfaction objectives
- S3: apply relevant standards and best practices to maintain information quality

This is as these are the skills needed to establish an appropriate ICT quality strategy.

Considering **Education and Training Provision (D.3)**, we can say that as technology grows in an incredible and fast rate, for sure Nirvana has this profile, in order to update or to teach the new technologies to their workers. This can be seen in a fragment of the description:

“Defines and implements ICT training policy to address organisational skill needs and gaps.”

Regarding the dimension 3, we can argue that at least Nirvana has a level 2 since you can always find new workers with the new knowledges, and then you don't have that necessity for updating your own workers exhaustively.

Looking at the dimension 4, the most relevant knowledge that Nirvana might have in this profile is:

- K2: the competitive market for educational offering

This is, because you have to know what are the profiles that are being requested in the market in order to improve your own workers.

And the most significant skills are:

- S2: identify and maximise use of resources required to deliver a cost effective schedule
- S5: design curricula and training programmes to meet customer ICT education needs

This is, since Nirvana might be interested in being the most efficient and fulfil the technical necessities of their customers.

Looking at **Sales Management (D.7)**, we can say that ICT companies as Nirvana usually sales their products based on the added value of this ones, thus, in order to make this done, companies need an efficient and effective sales management. This can be seen in the description of the profile:

“Drives the achievement of sales results through the establishment of a sales strategy. Demonstrates the added value of the organisation's products and services to new or existing customers and prospects.”

Taking into account dimension 3, we would agree on that Nirvana at least has level 3 and should have level 4, since as an e-company it only has to focus in present perfectly their products and make a properly strategy of sales.

Regarding dimension 4, the most relevant knowledge that Nirvana might have in this profile is:

- K3: market trends and own service offering portfolio
- K6: current market imperatives e.g. risks, changes, innovation

This is, because it is needed to know the market trends and current imperatives in order to hold an effective sales management, and more taking into account that the technical markets changes immensely in a few minutes.

And the most significant skills are:

- S2: keep abreast of market news e.g. risks, changes, innovations and communicate to internal business units, to improve service and product portfolio
- S5: analyse sales performance to build forecasts and develop a tactical sales plan

This is, since being aware of the changes of the market and being able to decide based on your past sales are very useful skills that every e-company should have.

If we take a better look at **Personnel Development (D.9)**, we can see a profile not too much distant to the one we saw in *Education and Training Provision*, thus we would say that this and the other one should go along in a company as Nirvana. This relation can be seen in this fragment:

“Diagnoses individual and group competence, identifying skill needs and skill gaps. Reviews training and development options and selects appropriate methodology taking into account the individual, project and business requirements.”

Regarding dimension 3, we would argue that Nirvana might have a level 5 of proficiency, since developing and training your own workers in a e-company is crucial as we are in a market that changes all time in different directions.

Considering dimension 4, we ponder that the most relevant knowledge that could be applied to Nirvana is:

- K2: competence and skill needs analysis methodologies
- K3: learning and development support methods (e.g. coaching, teaching)

This is, since in order to fill our skill gaps we need to know which skills and competences we lack most, and for sure, we must know how to teach or transmit them.

And the most important skills are:

- S1: identify competence and skill gaps
- S5: address professional development needs of staff to meet organisational requirements

This is, because as we have said before, we must identify our skill holes and we should lead our resources to develop our workers in such a way that we fill those holes.

Looking at **Information and Knowledge Management (D.10)**, we may agree on that in a e-company, the information is the most valuable resource and then it must be properly managed, that is why this profile has to be applied in the Nirvana company. The most important details of this competence can be seen in this fragment:

“Identifies and manages structured and unstructured information and considers information distribution policies. Creates information structure to enable exploitation and optimisation of information.”

As we have said before, since information is the most relevant resource, for sure, Nirvana has the highest level of proficiency in the dimension 3, that is, level 5.

Regarding dimension 4, we think that the most relevant knowledges that Nirvana might have are:

- K2: ICT devices and tools applicable for the storage and retrieval of data
- K3: challenges related to the size of data sets (e.g. big data)
- K4: challenges related to unstructured data (e.g. data analytics)

This is, because knowing which tools are used to manage data and the two most critical challenges involving data are vital to control and structure appropriately all the information to be afterwards used efficiently.

And the most significant skills are:

- S4: make information available
- S6: capture, storage, analyse, data sets, that are complex and large, not structured and in different formats

This is, since having the abilities to make that all the company can use the information and knowing how to transcribe data in order to be properly used are two skills that enable the possibility of using and generate data in any level of the company, and this can increase processes, production, sales, etc.

Taking into account ***Needs Identification (D.11)***, we might think that Nirvana must have a nice centre of user support, that is, highly related to this profile as it can be seen in this fragment:

“Actively listens to internal / external customers, articulates and clarifies their needs. Proposes different solutions (e.g. make-or-buy), by performing contextual analysis in support of user centered system design.”

A company as Nirvana needs only a nice centre of user support, not a perfect one, in the dimension 3 only needs a level 3 of proficiency.

Looking at dimension 4, the most relevant knowledges that Nirvana might have in this profile are:

- K4: customer need analysis techniques
- K5: communication techniques

This is, as we must know what are the needs of our customers and how to communicate with them in order to solve their problems.

And the most important skills are:

- S1: analyse and formalise business processes
- S2: analyse customer requirements

This is, because as we have said before, to properly solve the problems of our clients we have to analyse their requirements and know which are our processes.

Finally, **Digital Marketing (D.12)**. If we conceive Nirvana as an enterprise related to what modern-day Google is, it is not hard to realize that marketing is at the very core of its business. This is because Google makes money selling ads. And in the case that Nirvana didn't base its business model on advertising, it would still need to be very good at digital marketing. We could argue that any modern ICT company *must* be good at digital marketing if it is to survive, because the stakes related to this competence are extremely high nowadays. Apple relies on digital marketing to drive sales, Google makes digital marketing its very business. And so, does Twitter.

We can see this most clearly in some excerpts from the PDF this report is drawing information from (the one provided) by looking at the following quote related to digital marketing:

“Understands the fundamental principles of digital marketing. Distinguishes between the traditional and digital approaches. (...) Plans a coherent strategy using the most effective means available. Understands the data protection and privacy issues involved in the implementation of the marketing strategy.”

Regarding dimension 3, Nirvana must have a level 4, the maximum, as it is a company focused on technology.

Taking into account dimension 4, the most relevant knowledges that Nirvana might have in this profile are:

- K4: search engine optimization (SEO)
- K6: social media marketing

This is, because any relevant and modern company uses both of these knowledge items in their own digital marketing endeavours, thus, Nirvana must not lack these two. In this category, we can assume that knowledge and skills act as synonymous concepts, as one could easily argue that, nowadays, SEO is as much a knowledge as it is a skill. This very same reasoning has been used to justify the choices of skills that are present in the following sentences.

And the most significant skills are:

- S3: use and interpret web analytics
- S4: understand the online environment

As outlined above, digital marketing might very well be the core of Nirvana Co 's business model. If that is to be correct, it is only logical to assume that the company has skills related to

web analytics and the usage of the online environment, since these are paramount and basic if the company is to master and deploy effective Digital Marketing strategies.

Turning to the E e-CF area in Dimension 1, we can see that it includes 9 e-Competences, which stand for dimension 2 profiles. These are:

- E.1. Forecast Development
- E.2 Project and Portfolio Management
- E.3 Risk Management
- E.4 Relationship Management
- E.5 Process Improvement
- E.6 ICT Quality Management
- E.7. Business Change Management
- E.8. Information Security Management
- E.9 IS Governance

When trying to ponder on how Nirvana is reflected in these e-Competences, the ones which can be selected by analysing the episode or can be implicitly guessed are:

- ***Forecast Development***
- ***Project and Portfolio Management***
- ***Relationship Management***
- ***ICT Quality Management***
- ***Information Security Management***

With regards to ***Forecast Development***, we can say that is a competence which should be in every company, as it is said in its description:

“Interprets market needs and evaluates market acceptance of products or services. [...]. Applies relevant metrics to enable accurate decision making.”

Nirvana, as it is said in the chapter, is one of the most powerful companies so for sure it should be completely aware of the market and their needs and to effectively comprehend all the variables that affect the market, as well as the necessary knowledge on how to approach them.

Considering this information, we could position Nirvana, by means of dimension 3, at level 5.

Looking at the dimension 4, we agree that most relevant knowledges that Nirvana has are:

- K2: Accessibility of the market according to current conditions
- K4: large scale data analysis techniques

These knowledge items are needed to know better about the market that the company is trying to approach, as to obtain necessary information about the different aspects that will affect to the market.

And the skills needed to establish an efficient forecast management are:

- S1: To apply what-if techniques to produce realistic outlooks
- S2: To generate sales forecasts in relation to current market share
- S5: To interpret external research data and analyse information

These skills are key to this competence because Forecast Development relies on effectively asking questions and then analysing research data to empirically get accurate answers to whatever we're asking. This is exactly why we have chosen to include these skills, they are intrinsically related to the e-Competence inherent to Forecast Development.

Turning to **Project and Portfolio Management**, as one of the top companies, Nirvana presents the characteristics of this competence:

"Implements plans for a programme of change. Plans and directs a single or portfolio of ICT projects to ensure coordination and management of interdependencies. Orchestrates projects to develop or implement new, internal or externally defined processes to meet identified business needs."

As we see in the episode, each project in which the company is working is divided between the different engineers.

Given the circumstances, Nirvana could be rated with level 5.

We think that Nirvana has the following knowledges:

- K1: a methodology to approach the project and to define the steps to be taken
- K2: the technologies that should be implemented

And we pointed out the following skills:

- S4: to delegate tasks and manage the team
- S2: to break the project plan into individual parts

Nirvana must provide strategic leadership and be able to manage complex projects and programmes to deliver benefits in business and strategy.

We now focus on **Relationship Management**, Nirvana must implement a strategy with its audience (stakeholders, clients and other business). As it is said in its definition:

"Establishes and maintains positive business relationships [...]. Maintains regular communication with customer/partner/supplier."

As Nirvana must provide investment in both, new and existing relationships and maintain positive business relations, we concluded that must be at level 5.

Turning to dimension 4, the knowledge that the company must present is:

- K1: to make decisions in order to organize the project structure and budget.

This is because they must be able to be realistic and make the correct decisions in order to establish trust with their clients and stakeholders.

Finally, the skills that we observed in Nirvana were:

- S2: to identify win-win opportunities.
- S3: to establish realistic models to develop trust.

We argued that these skills must be present in Nirvana as they were able to develop this trust in stakeholders as they were positioned above most of the competence.

If we take a better look to **ICT Quality Management**, in modern organizations, technologies are used to organize their processes. So, it is important to take care of the ICT systems by means of revisions or audits. As it defined in the European mark:

"Implements ICT quality policy to maintain and enhance service and product provision. [...]. Reviews quality measures and recommends enhancements to influence continuous quality improvement."

We could locate Nirvana at level 4-5, as it should provide a quality policy which would accomplish and set their standards.

We now focus on dimension 4, we remarked the following knowledges:

- K1: which methods and when should be applied.
- K2: the internal quality audit.

As a modern company, Nirvana must implement these audits to provide better results and increasing the trust of customer.

Turning to the skills:

- S2: to evaluate the processes to identify strengths and weaknesses.
- S4: to monitor, understand and act upon indicators.
- S5: to perform audits.

To identify elements which should be corrected before it affects the company and to implement in a correct way the audit.

Looking at **Information Security Management**, Nirvana, as a modern company, must implement some policies known as ISMS (which stands for Information Security Management System) to minimize risks by avoiding security leaks.

As it is defined:

“Monitors and takes action against intrusion, [...]. Reviews security incidents, [...] to ensure continuous improvement of security provision.”

We could position Nirvana then at level 5, as it provides the integrity and confidentiality of their data and includes continual improvement to limit the impact of the security breaches.

We now look at dimension 4 and we could identify the following knowledges:

- K2: to know practices and standards in information security management.
- K3: to know the risks for information.
- K5: detection techniques.
- K6: countermeasures to cyber-attacks.

Nirvana must also present the next skills:

- S4: perform security audits.
- S5: apply monitoring techniques.

Nirvana must address this directive to control the behaviour of its employees to guarantee this knowledges and skills.

c) Build **Dilbert's competence profile** using e-CF. Sample Job Advertisement. And explain.

After a thorough analysis of the episode, we were able to understand both Dilbert's responsibilities as an employee, what the employer expects of Dilbert, Dilbert's competences and the projects he has been part of.

We concluded that Dilbert's main occupation is designing and leading the development of new products. Several examples from the episode that helped us conclude this were his *building* of an exercise machine or the proposal to *build* an underwater barbeque at Nirvana Co.

Taking all of this into account, we have chosen **Product Engineer** as the occupation we believe best represents Dilbert's role as employee, and thus this is what we put ourselves to work and to build a job advertisement upon.

PRODUCT ENGINEER - JOB DESCRIPTION

Company

Nirvana Inc. is an information technology company with more than 90 years of experience and multiple industry leading innovations. We believe technological process is the vehicle to a better world and we're looking for passionate professionals to help us improve people's lives.

Job Title

Product engineer

Job Location

Menlo Park, CA

Employment

Full-time, on-site.

Compensation

Salary and compensation packages to be discussed between the candidate and the interviewer.

Job duties

- Identifying market opportunities for new products and designing products and services that fit both the company and the consumer's requirements and expectations.
- Research materials and techniques required for the projects.
- Gather feedback from users and adjust the product strategy according to the information obtained.
- Produce prototypes and test functionality.
- Time-management skills.

EMPLOYMENT REQUIREMENTS

Summary statement

Designs and develops products. Must supervise the whole process of creation, from planning and design to manufacturing and assembly, making sure the product arrives to the market in a successful and cost-effective way.

Mission

Leverage existing resources and new technologies to create market-leading, revolutionary products and services that provide maximum value to our clients.

Education

Bachelor's Degree in Product Engineering or similar qualifications. Master's degree in a related engineering field.

Work experience

Required 7 or more years of experience in relevant product design and engineering positions. At least 3 years of experience in managing small to medium sized product design and engineering teams.

e-Competences

A.4 - Product and Service Planning (L3-L4)

The first step when designing a product is laying down the roadmap of the development of the product. As such, strengths and weaknesses, costs and risks of the product must be taken into account when building the framework to accommodate the development of the new invention. The product engineer must take responsibility for integrating all the pieces of the project.

A.7. Technology Trend Monitoring (L4)

An essential part of turning ideas into successful products is innovation. A product engineer must be aware of and understand new technological developments, including ICT. Also, he or she must be capable of making strategic decisions based on these solutions, in order to integrate them into new or existing products.

A.9 - Innovating (L5)

Continuing along the same path as the previous point, a good product engineer must not only exploit existing technologies, but also generate his or her own ideas on products and services, as well as novel ways to integrate them in a holistic manner with the rest of the existing product and service lines. A product engineer that is capable of generating novel concepts and revolutionary solutions will provide a generous competitive advantage to the company.

B.2. Component Integration (L3)

The product engineer must consider the advantages, challenges and viability of integrating ICT solutions into existing or new products and services. When integrating either hardware or software, he or she must ensure proper compatibility and perform the required testing in order to ensure the correct behaviour and performance of all the components involved in the project.

C.4 - Problem Management (L3-L4)

In order to deviate as little as possible from the established roadmap and deadlines it is essential for a product engineer to be able to detect, solve or report any technical problems in a timely manner. To do this, a deep understanding of the existing infrastructure is necessary if we either want to modify an existing product or solution, or use the existing framework for the creation of a new one. Finally, emotional issues are just as bound to arise as technical problems, which means deescalating the former is just as important as solving the latter.

D.4. Purchasing (L2)

When placing orders for the components or services required to bring the product to life it is of utmost importance to have an understanding of the existing and available supplier relationships, as well as considering which one offers the best blend of cost, performance, quality and compliance with energetic and environmental regulations. A product engineer must leverage benefits and advantages arising from existing contacts, relationships and current position of the company.