



“AI Impact: The future competences of consultants in the Consulting Sector”

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Abstract

Title: AI Impact: The future competences of consultants in the Consulting Sector

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Keywords: Artificial Intelligence (AI), Consulting, Competences, Impact, Evolution, Data Analysis, Automation, Language Models

Consulting is just one of several sectors that has been significantly affected by the evolution of Artificial Intelligence (AI), namely in the huge reduction in time spent by consultants on various tasks, the processing of large volumes of data and the automation of repetitive tasks. This Master's thesis studies the impact of AI in this sector with a focus on identifying the future competences of consultants.

Thus, this study aims to answer the research question: “What will be the future competences of consultants with the impact of Artificial Intelligence?”. The literature review focused on knowledge about this emerging technology and its impact on both the consultancy sector and consultants' skills.

In addition, semi-structured interviews were conducted with 11 professionals experienced in consulting and AI, and the data was then analyzed using a thematic analysis methodology.

The results show that AI increases the efficiency of consultants' different tasks, allowing them to be carried out more quickly and accurately. However, there are important new competences, namely Critical Analysis, Market Specialization and Client Communication, Strategic Capacity, mastery of Prompt Engineering and Updating and Knowledge of Artificial Intelligence technologies to guarantee success and relevance in this sector.

It is becoming important for consultants to reinvent and update themselves in order to take advantage of emerging opportunities and face the challenges posed by the rise of AI in the consulting sector.

Sumário

Título: Impacto da IA: As futuras competências dos consultores no sector da Consultoria

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Palavras-Chave: Inteligência Artificial (IA), Consultoria, Competências, Impacto, Evolução, Análise de Dados, Automação, Modelos de Linguagem

A consultoria é apenas um dos vários setores que foram afetados significativamente pela evolução da Inteligência Artificial (IA), nomeadamente na grande redução de tempo dispensado pelos consultores em várias tarefas, no processamento de grandes volumes de dados e ainda na automação de tarefas repetitivas. Esta tese de mestrado estuda o impacto da IA neste setor com foco na identificação das futuras competências dos consultores.

Deste modo, este estudo tem como objetivo responder à questão de pesquisa: "Quais serão as futuras competências dos consultores com o impacto da Inteligência Artificial?". A revisão de literatura focou-se no conhecimento sobre esta tecnologia emergente e o seu impacto tanto no setor da consultoria como nas competências dos consultores.

Adicionalmente, foram realizadas entrevistas semi-estruturadas com 11 profissionais experientes em consultoria e IA, tendo sido os dados, posteriormente, analisados através de uma metodologia de análise temática.

Os resultados mostram que a IA aumenta a eficiência das diferentes tarefas dos consultores, permitindo que estas sejam executadas de forma mais rápida e precisa. Contudo, existem novas competências importantes, nomeadamente a Análise Crítica, Especialização no mercado e Comunicação com o cliente, Capacidade Estratégica, o domínio do Prompt Engineering e Atualização e Conhecimento sobre as tecnologias de Inteligência Artificial de forma a garantir o sucesso e relevância neste setor.

Torna-se importante que os consultores se reinventem e se atualizem de forma a aproveitarem as oportunidades emergentes e enfrentarem os desafios impostos pela ascensão da IA no setor da consultoria.

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1. Introduction

The growing evolution of Artificial Intelligence has led to very significant differences in different sectors, including consulting. Artificial Intelligence is one of several inventions that have changed the way everything works lately by providing new opportunities and challenges, making it important to re-evaluate the skills of professionals to remain relevant. In the field of consulting, where adaptability and specialized knowledge are essential, the synergy between artificial intelligence and consultants is set to change the skills needed to succeed in this ever-changing sector.

It is necessary to understand how the future competences of consultants will be impacted by AI as it becomes more intrinsic in the different consulting processes.

Thus, the challenge for consultants is to develop skills that complement and take advantage of the potential of artificial intelligence, even though it guarantees the automation of many analytical and repetitive tasks. However, it is still difficult to identify these future skills precisely and the fact that we are experiencing a rapid pace of technological change means that there is an urgent need to identify and develop certain skills to ensure that consultants continue to play important roles.

Considering this scenario, this study focuses on the need to answer the research question: **"What will be the future competences of consultants with the impact of Artificial Intelligence?"** The aim of this essential question is to analyze the future competences of consultants, considering the impact that AI has on current conventional competences.

This study aims to answer the research question and provide useful information, both for professionals in the consulting sector and for different organizations, helping them to adapt to the changes inherent in the world of consulting, which is increasingly driven by AI.

The methodology applied follows inductive research through the collection of qualitative data, based on interviews conducted with 11 consultants with specialization in Artificial Intelligence to acquire more in-depth information so that we can formulate an answer to our research question.

2. Research Question

This thesis will be supported by the following Research Question:

"What will be the future competences of consultants with the impact of Artificial Intelligence?"

3. Theoretical Discussion

3.1 The Consulting Sector

Consulting plays an important role in providing specialized services and strategic insights to help organizations operating in different sectors, to solve problems, improve their performance and achieve their strategic objectives.

The origins of the consultancy sector date back to the time of the industrial revolution, when companies turned to external professionals to help with the various management problems that companies had, however, the consulting sector was not yet consolidated (Clark & Kipping, 2012).

Since then, it has undergone several transformations to adjust to economic and technological changes over the last few years, having evolved a great deal from its origins in the 19th century to the present day, with the purpose of responding to the ever-changing needs of each organization (Greiner, 1998).

However, despite continued growth, the consulting sector faces several challenges. These challenges are driven by the great need to deliver good results and add value to the various services provided to clients, at a time when competition between large consulting firms is intensifying. As a way to ensure competitiveness in such an inconstant market, data analysis and digitalization have become crucial, leading consultancies to offer digital transformation services (Bughin et al., 2017).

The need for new technical skills with a focus on using the sophisticated digital tools available is becoming a necessity for consulting professionals in a sector where processes are becoming increasingly automated and Artificial Intelligence is being used. Only by adapting in this way, consultants will be able to remain differentiated in such a competitive market.

In conclusion, consultants will be able to remain differentiated by acquiring new skills and adapting in such a competitive market and be able to deal with the difficulties and take advantage of the various opportunities that arise as a result of AI's influence on the sector.

3.1.1 The traditional competences of a consultant

Consultants play a crucial role in a wide variety of sectors by providing highly specialized insights, leading business change and guiding strategy for companies looking for significant improvements in their services.

Consultants therefore need to have a wide range of traditional competences in order to be effective in their roles and stand out. These skills are crucial for consultants to excel in challenging and ever-changing environments, but they are also important for interpreting the client's needs and meeting them when it comes to strategy.

Analytical ability is a crucial skill for consultants which allows them to analyze the complexity of data, compile that data and extract the necessary information that allows for a much deeper and more accurate analysis and provides them with more strategic and targeted recommendations. Good consultant analysis enables the identification of patterns in the data that make it possible to preview opportunities and obstacles.

The ability to synthesize and contextualize the information extracted from the data allows consultants to filter out the most relevant information from a large amount of raw data and provide more accurate and effective solutions to the client's needs (Grant, 2016).

Another crucial skill for consultants is effective communication, since consultants act as a bridge between the different stakeholders, it's important to convey the most complex information in the most direct and comprehensible way. In addition, this communication makes it possible to get closer to the client, guaranteeing a better understanding of their needs and expectations and thus aligning the defined strategy with the company's objective. In the consultancy sector, given the interaction with different stakeholders with different perspectives, knowledge and expectations, it's essential to adapt communication to the target audience with the aim of making abstract concepts into a more tangible form (Block, 2011).

To guarantee the success of the different activities, the consultant must also have comprehensive knowledge within the sector, in order to guarantee monitoring of trends, as well as the challenges and opportunities present.

In this way, consultants can provide much more valuable insights to their clients so that they can adapt and make the most of it and remain competitive in the market. For projects to be developed and completed effectively, on time and within the set budget, efficient management of the different projects is crucial. This requires consultants to have a good ability to coordinate the different tasks involved, assertive communication with the client and a good team leadership spirit.

This efficiency in resolving projects improves client satisfaction and strengthens the consultant's reputation as a reliable professional (Kerzner, 2013).

Flexibility and adaptability are other competences present in a consultant's profile.

The challenges present in each project, from changing market trends to client needs, mean that flexibility is indispensable in order to deal with these changes proactively, since a rapid adjustment of plans to the implementation of new strategies.

And while flexibility focuses on responding quickly to changes, adaptability focuses on transformation and evolution. Consultants must remain focused on developing new skills, working with new tools and keeping up to date with market trends. In this way, adaptability ensures that activities progress and challenges are overcome.

In addition, the combination of flexibility and adaptability creates a good relationship with the client, with consultants overcoming the many difficulties present in the different cultures and processes of organizations.

3.2 The Impact of Artificial Intelligence in Consulting

3.2.1 The definition of AI

The definition of Artificial Intelligence is a broad concept that has many meanings. The term “Artificial” means that it is a technology that cannot exist without human intervention and “Intelligence” with the meaning of a capable and efficient machine.

In other words, it is the ability of a machine or other technological tool to reproduce skills very similar to those of humans, often in the same way or even better than humans (Dobrev, 2012).

In this way, it guarantees the availability of all the necessary technologies so that the machine can think autonomously and perform some human actions, such as reasoning, learning and making decisions. However, these actions will only be possible if it has access to a large set of quality data to ensure more accurate, reliable and useful analyses for decisions and strategies.

3.2.2 The history of Artificial Intelligence

Although the term Artificial Intelligence goes back a few years, the concept only emerged in the 1950s, when Alan Turing marked a significant milestone in the history of Artificial Intelligence with an article entitled “Computing Machinery and Intelligence” in which he introduced the first concept of machines capable of performing tasks intelligently.

In this article, Turing presented his theory on programming an intelligent computer, which resulted in an imitation test, the Turing test. This test is essentially a simulation game in

which the interrogator asks the computer and the human questions in order to tell them apart. If the interrogator couldn't tell the difference, the test was successful, and Turing also stated that if the computer can communicate as well as a human being, it is a strong indication of the presence of intelligence (Turing, 1950).

A turning point in this branch of Artificial Intelligence came in 1956, with a document entitled “A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence” where the main objective was a conference with researchers and scientists, namely John McCarthy, Marvin Minsky, Nathaniel Rochester and Claude Shannon, to analyze the feasibility of machines being able to simulate human behavior. After this conference, the term “Artificial Intelligence” was officially coined and many of the goals and ideas of AI were established.

In addition to initiating the study of this field, the Dartmouth proposal contributed to the advancement of machine capabilities in different areas such as machine learning, natural language processing (NLP), among others (McCarthy et al., 2006).

During the initial years of this technology, study focused only on more basic activities such as problem solving, however, from the 1970s onwards, artificial neural networks began to emerge with the more advanced aim of replicating the thoughts of human intelligence and solving more complex problems.

Later, from the year 2000 onwards, AI saw a huge increase in computing power and machine learning algorithms, allowing it to be increasingly integrated into various sectors to this day, such as health, consultancy, finance, among others.

3.2.3 Types of Artificial Intelligence

It is important to analyze the different types of Intelligence and understand how they are helping to make consulting practices more efficient.

ANI, Artificial Narrow Intelligence, is the most basic and common type of AI and is currently only specialized to perform specific tasks with only one field of expertise. In the consulting sector, it is already used to automate routine tasks and analyze large volumes of data.

AGI, Artificial General Intelligence, is a concept that is still theoretical and under development. This type of intelligence refers to systems with intelligence comparable to humans, with the ability to understand, adapt and comprehend. This type, unlike ANI, will not be limited to just one area of specialization, but will be able to have knowledge in different areas and contexts. This type of artificial intelligence would have the ability to provide strategic insights into more complex problems.

Finally, ASI, Artificial Super Intelligence, overcomes those previously listed and is still at a hypothetical level. This technology would be much more comprehensive and capable of performing tasks that humans cannot, completely transforming the consulting sector.

However, in the face of this constant rapid evolution of this emerging technology, another type of AI has recently emerged, known as Generative Artificial Intelligence or just GenAI. This type of technology has the ability to generate new content. In other words, based on the language models that this technology has, this system is able to learn from human patterns and requests, and is able to generate content, both in terms of text, images and even music (Law, 2024).

ChatGPT, Google's Bard, and many others are some examples of this type of technology and while chatbots will deal with less valuable and repetitive tasks, the consultant will have a different role and will have to focus on tasks with greater value (Law, 2024).

It is therefore important for consultants to be aware of these technologies, to integrate them into their tasks, but in such a way that the benefits are maximized and the risks minimized.

3.2.4 The advancements of Artificial Intelligence

Recently, the field of consultancy has emerged as a thriving and consistently recognized business domain in various professional spheres. Consultancy services have seen a great expansion in recent times and have established themselves as fundamental in various sectors.

In recent years, there has been a remarkable advance in artificial intelligence and with the continued growth of these technologies, several industries are seriously considering integrating Artificial Intelligence processes into their operations, and the consulting sector is no stranger to this trend. Both large and small organizations are investing in the creation of specialized AI departments, recognizing the numerous benefits that implementing and advising on improved intelligence can bring to different areas of activity.

Data analysis is a field of great prominence since AI algorithms can process large amounts of data in real time and extract very valuable insights. This advantage ensures access to more accurate data, guaranteeing the ability for consultants to make more structured and informed decisions (Davenport et al., 2018), ensuring greater satisfaction and loyalty by offering services that are more tailored and personalized to the unique needs of each client (Taherdoost & Madanchian, 2023).

The automation of repetitive tasks, such as data processing, reporting and document analysis, has been another of AI's great advances. In this way, it is possible to increase

operational efficiency by freeing up human resources for activities with greater added value (Davenport et al., 2018).

Identifying and mitigating risks are other major opportunities that AI can bring to the consulting sector, ensuring compliance with various laws (Law, 2024).

3.3 Human Intelligence vs Artificial Intelligence

3.3.1 The impact of Artificial Intelligence

The debate around Human Intelligence and Artificial Intelligence has generated in-depth analysis and some controversy recently.

As Artificial Intelligence continues to improve, comparing its capabilities with those of Human Intelligence becomes essential if we are to understand the impact of these technologies on our ever-changing world.

In this discussion, it is crucial to explore the complexities and differences between these two types of intelligence, allowing us to glimpse both the opportunities and the challenges that arise in this context.

Artificial Intelligence has the potential to create new job positions, as well as expand existing ones, and humans are therefore required to adapt toward acquiring new skills that can contribute to this scenario.

This perspective highlights the extreme importance of seeing AI not as a threat to human occupation, but as a stimulus to the evolution and development of professional skills, since emerging technologies have the potential to increase productivity and offer greater efficiency in solving problems that previously required human intervention (Brynjolfsson & McAfee, 2014).

In order to ensure preparation for the upcoming challenges and opportunities of automation, the high importance of training programs for the current changes should be emphasized (Gregory & Zierahn, 2016).

While some traditional professions may face challenges due to automation, the emergence of new industries and job opportunities offers a promising scenario for those willing to embrace change and get involved in fast-growing sectors (Brynjolfsson & McAfee, 2014). Even in the most threatened sectors, there is room for adaptation and growth, as the demand for specialized knowledge and human creativity continues to grow.

The rapid evolution of Artificial Intelligence raises concerns about its potential impact on society, as it could cause significant disruption to the labor market by replacing a wide variety of functions performed by human beings. The advancement of machine capabilities could lead to a large-scale unemployment crisis that will translate into complex socio-economic challenges, as humans have a limited capacity for processing data and information, while Artificial Intelligence has a notable advantage in its superior ability to analyze large volumes of data (Korteling et al., 2021).

Increasing automation and the potential impacts of Artificial Intelligence raise concerns about the future of the economy and work. While technological advances can guarantee innovations and efficiencies in many sectors, it is also clear that these changes could have a negative impact on the current workforce (Ford, 2015).

The loss of specific skills and competences that were previously valued in the job market leads to the devaluation of different skills that are not easily replaced by machines. The fear of losing one's job, and in turn one's livelihood, is intrinsically linked to the emotional and mental well-being of the population, and can generate high levels of stress, anxiety and uncertainty about the future (Ford, 2015).

The redefinition of the landscape of traditional professions with the advance of automation alerts workers to the need to acquire new skills and competences with the purpose of adapting to the demands of an increasingly automated work environment, thus avoiding professional obsolescence (Grace et al., 2017). The importance of acquiring new capabilities for interpreting the results generated by AI is clear, with the aim of guaranteeing understandable insights that add value to the client (Gînguță et al., 2023).

4. Research Methodology

In this research methodology chapter, a qualitative approach was used to identify the future competences of consultants with the impact of Artificial Intelligence.

Conducting these interviews with professionals in the consulting field with experience in AI offers a unique opportunity to draw conclusions from the interviewees' high level of experience and insight, allowing for a deeper and more holistic understanding of the impact of artificial intelligence on the consulting world and the future competences of consultants.

This qualitative approach, combined with the literature review, ensures a comprehensive and informed analysis of emerging trends and the future requirements of consulting professionals.

4.1 Qualitative Data Collection

4.1.1 Qualitative Research Approach

To answer the research question, a qualitative approach was used since the complexity inherent in the intersection between the evolution of Artificial Intelligence and the skills of consultants requires a more demanding approach than just quantitative metrics. The choice of a qualitative methodology allows for a more in-depth and holistic analysis of the future skills of consultants in a rapidly changing world.

Consultants' skills are influenced by a variety of interpersonal and even contextual factors, and qualitative analysis is important for analyzing all these nuances, since this methodology is particularly suitable for investigating more complex and little-explored phenomena, which guarantees a more in-depth survey of concepts and experiences (Creswell, 2013).

This approach allows for flexibility in the formulation of questions and the conduct of the interview, allowing the interviewee to express themselves freely about their ideas and opinions, leading to deep insights into future competences. On the other hand, using the quantitative method would not have been possible because it involved structured, closed questions that limited the ability to explore more complex issues (Rahman, 2016).

4.1.2 Semi-structured Interviews

For this research, a semi-structured interview was used, using a script to guide the conversation, but without understanding it as a rigid structure.

This type of interview allows new questions and topics to emerge as the conversation progresses, making it possible to explore unexpected areas that may be crucial to understanding what the consultants' future skills will be (Adams, 2015).

On the other hand, the use of a script arises not only from the need to structure the conversation, so that there is no dispersion of themes, but also from the opportunity to compare the answers of the different interviewees in a more consistent way, which ensures that it is easier to identify patterns and trends in order to answer our research question (Wilson, 2014).

4.1.3 Interview protocol and Process

The video call interviews were conducted in Portuguese using Google Meets and Microsoft Teams and lasted between 30 and 40 minutes, with a few exceptions. All these calls were recorded and transcribed so as not to lose any relevant information.

The interviews were carried out with professionals with several years' experience in the consulting industry and with a strong focus on Artificial Intelligence, and the names of the people interviewed and their respective positions are listed in the table below.

ID	Name	Job Title
I1	Miguel Botto	AI Digital Executive Director
I2	Carla Cardoso	Head of Advanced Analytics & Artificial Intelligence at NTT DATA Portugal
I3	Manuel Adegas Henriques	Manager of Data & AI at EY
I4	Arlindo Oliveira	Distinguished Professor of Instituto Superior Técnico Member of the Portuguese Academy of Engineering and senior member of IEEE
I5	António Matos	Manager of Data & AI at Deloitte
I6	Vasco Pena Monteiro	Tech Manager at Deloitte
I7	Hervé Silva	Partner of AI at Deloitte and Lead Partner of Artificial Intelligence
I8	João Barros	Senior Manager of Data & AI at EY
I9	Daniel Belém Duarte	Senior Manager of Data & AI at Deloitte
I10	Hugo Cláudio	Tech Director of Data & AI at Deloitte
I11	Sérgio Ferreira	Partner at EY Consulting

Table 1: List of Interviewees and Their Respective Job Titles

4.2 Data Analysis

4.2.1 Braun and Clarke Methodology

In this study, a thematic analysis described by Virginia Braun and Victoria Clarke was used to analyze the qualitative data obtained during the interviews with experts in the field of consulting and Artificial Intelligence.

This thematic analysis allows for the identification, analysis and interpretation of patterns within the qualitative data set and is organized into themes in order to explore and understand the data that is really important for the study being carried out (Braun & Clarke, 2006).

This methodology involves a multi-stage process, first of all, familiarizing with the data, transcribing the interviews, reading them and gathering together some main themes.

Then, main themes are generated from some emerging patterns found in the data, such as concepts, ideas or experiences. After this stage, the themes are grouped into more general themes with the aim of naming a main theme.

Finally, the most important themes are detailed and explained, supported by transcripts of the interviewees, which offer a unique perspective, help in understanding the case study and enable a conclusion to be reached and the research question to be answered.

4.2.2 Data Analysis Process

This thematic analysis has a flexible approach that allows the method to be adapted to the specific needs of the study (Braun & Clarke, 2006), and in this case a table was used to analyze the qualitative data.

The first column shows the interviewees' transcripts with observations on different themes.

The second column identifies the individual themes for each transcript. Then, in the third column, these previous themes were grouped into larger themes according to similarities and patterns that identify broader concepts. And finally, in the last column, the core competences that form part of the answer to our research question have been identified.

5. Analysis and Results

Transcripts	Themes	Grouped Themes	Key Competence
“But we mustn't slack off or lean back, because the need now is to worry twice as much and have a much sharper critical spirit.” I5	Need for critical thinking	Criticism of the work carried out by the AI	5.1 Critical Analysis
“there's nothing like a critical spirit, which is why I say that the profiles will be much more linked to the business than to the technological side” I8	The importance of critical thinking		
“The systems, at least for the time being, aren't up to the level of guaranteeing results.’ I4	AI limitations	Errors made by AI in analyses	
“Someone who can identify all the hallucinations that the AI will commit” I5	Hallucinations of Artificial Intelligence		
“it's always necessary to have a human validating, understanding, identifying whether there are errors or not and it's increasingly necessary to have professionals with a strategic eye who can interpret and analyze the code” I5	Identifying Artificial Intelligence errors		
“What data? What data and how should it be processed? Which data is most important for our needs? That's what's most important now” I1	The importance of carefully selecting the necessary data	Importance of human intervention in reviewing documents, data and final decisions	
“We still have no substitute for the final judgement” I2	The need for human decision-making		
“I don't see artificial intelligence taking away that heavy burden of reviewing all the documentation, everything you produce.” I8	Human validation		
“These complex problems that customers sometimes ask to us, I don't see artificial intelligence solving them” I8	Need for human intervention		

Table 2: Thematic Analysis of "Critical Analysis" Competence

Transcripts	Themes	Grouped Themes	Key Competence
“entrepreneurs will want to be counselled, so they'll look to a consultancy firm... and they'll want to be much closer and have more accessible communication that isn't technical” I1	Accessible customer communication	Knowledge and interpersonal relationships	5.2 Market specialization and Customer communication
“We have factors that allow us to see the problem in a different way. At least until now, we haven't been able to transmit to computers, to these algorithms, a set of things that have a lot to do with the interpersonal relationships we have with each other, with the global perspective of companies within the market.” I2	Human perspective and interpersonal relationships		
“you need people who know how to communicate with the customer, someone who can talk, who can explain something to someone else, this is important” I5	Customer communication		
“So here you always have this much more social component, which artificial intelligence probably won't adopt so easily” I8	Advantage of communication over AI		
“If we have more free time, it means that we'll end up having more time to do other things, namely to invest more time in customer relations, to find new opportunities to do other types of business.” I9	The importance of investing time in customer communication		
“Because if machines are going to do a large part of our repetitive tasks, this will potentially free up time for us to do something else... which is relationships between people, relationships between clients” I11	Freedom from routine tasks to invest in the relationship between people and customers		

“you need to have knowledge of the client's business, area of operation, know the products, the structure” I5	Specialized knowledge of the client's business	Specialization and Business Knowledge	
“you look at a consultant who understands retail and that is the value that ChatGPT will never be able to give. ChatGPT has general knowledge but it will never be able to tell Sonae how to run promotions.” I6	Specializing in market niches		
“Artificial Intelligence will accelerate the need for specialization in the area of Advise and customer contact” I7	Need for specialization in business areas		
“the consultant, even with AI, has to have a very strong know-how, niche knowledge in order to be effective” I7	Importance of specialized knowledge for differentiation		
“the consultant has to specialize more and look at the problem, understand the problem, understand the client above all, this is crucial.” I8	Specialization and knowledge of the business and market		
“the more business consulting areas that have more contact with the client, when they came in they didn't have much specialization and now they're going to have to start focusing more on one type of market” I10	Need to specialize in one type of market for a greater impact on the customer		

Table 3: Thematic Analysis of "Market specialization and Customer communication" Competence

Transcripts	Themes	Grouped Themes	Key Competence
“The most basic part of data analysis will be lost, but people will have more time to do more complex analyses, much more strategic, and that's exactly what is intended” I7	Shift from the primary role of data analysis to strategic analyses	Evolution of data analysis with Artificial Intelligence tools	5.3 Strategic Capacity
“you'll spend much less time on the analytical part” I7	Reduced time spent analyzing and processing data		
“The fact that we can delegate data processing to artificial intelligence means that we have more time to investigate much more, to critically analyze and focus on strategy.” I2	Delegation of data processing to AI and focus on strategy		
“They have less work to do in analyzing the data and more to do in making strategic recommendations.” I4	Reduced time spent analyzing data and more focus on strategic recommendations		
“...the consultant's job will be different, it will be to help with the decision and the strategy and it will be how to compile this data to meet the client's needs” I1	The consultant's role in decision-making and strategy	Integration and the consultant's strategic role	
“the consultant is no longer going to be that person who turns up every now and then, but an integral part of the same strategy... because nowadays most consultants have a more analytical profile” I1	Contribute in a more strategic way to the project, leaving aside the more analytical part		
“The only way to stay relevant is to have skills that until now probably weren't considered so important, such as strategic counselling skills.” I4	The importance of strategic counselling skills		

” You'll have a greater focus on the functional part of the problem” I3	Change of focus to a more functional part of the project, rather than the technical part		
“One wants results and strategies...and the other just wants documents and data, the data AI makes, so that's not the way forward and that's clearly going to end, in my view” I1	Consultants focused on the project strategy		
“Consultancy is particularly affected by this need for data and the decision that goes with it, i.e. if we have a lot of data and anyone can have that data, we need to make a decision” I1	Abundance of data and the need to focus on strategy		

Table 4: Thematic Analysis of "Strategic Capacity" Competence

Transcripts	Themes	Grouped Themes	Key Competence
“you have to have a profile that understands how the machine thinks, how it reacts, what are the ways it interprets the information it's being given” I5	Need for knowledge about language models	Knowledge of language models	5.4 Prompt Engineering
“but I think the Prompt Engineers' themes and the way you interact with the models will be highly critical.” I9	The importance of Prompt Engineering and the need to study language models		
“But it's important that people, what we call business people, who are non-technical, business people also understand the care they have to take when asking questions and making requests.” I2	Knowledge of language models and how prompts are made		

“the more education you give the model, the better the result, because it will already tell you if I'm going to go there, and I think it's also a way of learning from the models themselves” I8	Learning about different language models		
“You have to ask the right questions so that he can answer you in the right way and solve the problem” I3	Importance of formulating prompts for a more assertive AI answers		
“for non-technical consultants, the way you ask the question is very important after you've given a correct answer. Imagine, in ChatGPT there are plenty of keywords that greatly improve the quality of his answer.” I6	Influence of keywords on ChatGPT response quality		
“you need someone who can break the whole problem down into prompts” I5	Interpretation of business needs and realization of targeted prompts		
“The prompt will make all the difference’ I10	Need a good prompt for a more correct answer		
“In this age of artificial intelligence, it's no longer just important what we know or have learnt, but with good questions we can ask, or prompts we can create.” I11	Clarity on needs and the way we do prompts		
“As for prompt engineering, it's going to be a necessity, just as English was a while ago” I7	Need to specialize in Prompt Engineering	Specialization in Prompt Engineering	
		The importance of good prompts for more precise answers without hallucinations	

Table 5: Thematic Analysis of "Prompt Engineering" Competence

Transcripts	Themes	Grouped Themes	Key Competence
“but we're going to have to be able to interact with these models in a natural way” I9	Natural interaction with Artificial Intelligence models	Interaction and Adaptation with AI	5.5 Updating and Knowledge of Artificial Intelligence technologies
“we have to adapt, we have to know how to make the most of this technology” I9	Maximising the use of Artificial Intelligence		
“Therefore, being super up-to-date on trends, everything new that technology is bringing and the advances.” I2	Constant updating on different Artificial Intelligence technologies	Continuous updating and training	
“I have to be up to date with technology on a daily basis to get the best out of it” I10	Daily updates on technologies		
“We have to be up to date and trained to know how to use this technology, it's not such a simple tool but through natural language we'll be able to get the best out of it” I10	Updating and training in AI technologies		
“have a minimum knowledge of artificial intelligence to know what it is.” I2	Minimum knowledge of AI required		
“they're going to have to have a basic knowledge of artificial intelligence tools, what they can bring, so that they can then take advantage of them.” I2	Basic knowledge of AI tools		

“has to give strategic advice, but that involves technology. So they have to be up to date and understand enough of the technology to be able to do that counselling.’ I4	Ensure knowledge of technology for better strategic advice	Strategy and technological knowledge	
“I think consultants need to master artificial intelligence technologies, particularly language models.” I4	Importance of knowledge of Artificial Intelligence technologies		
“the consultant has to basically understand all the opportunities opened up by these new technologies and they have to keep up with them very well.” I2	Knowledge of technological opportunities	Technological opportunities	
“you have to be aware that these tools exist, that they can speed up our work enormously” I5	Awareness of the advantages of different Artificial Intelligence tools		

Table 6: Thematic Analysis of “Updating and knowledge of Artificial Intelligence technologies” Competence

5.1 Critical Analysis

Efficiency and the ability to process large volumes of data have been truly remarkable as Artificial Intelligence expands in various sectors. Critical Analysis takes on a role as an important skill to guarantee efficiency but also a safeguard against all the limitations and mistakes made by AI.

The constant use of AI and the reduction in the time professionals devote to work processes require care and critical judgement. As well as facilitating processes, technology can also bring unexpected and unique challenges that can only be solved through thorough critical analysis. (“But we mustn't slack off or lean back, because the need now is to worry twice as much and have a much sharper critical spirit.” **I5**).

It is important to keep in mind that, AI will always need human supervision to function, regardless of its advancement. AI systems are not accurate because they can make mistakes or hallucinate (“The systems, at least for the time being, aren't up to the level of guaranteeing results.” **I4**).

Due to the high probability of errors and hallucinations, it is not only necessary to have technical skills in programming and data analysis, but it is also essential to have in-depth skills to evaluate and question the validity and applicability of the results generated by AI (“it's always necessary to have a human validating, understanding, identifying whether there are errors or not and it's increasingly necessary to have professionals with a strategic eye who can interpret and analyze the code” **I5**). Despite the great advances in AI's computational and analytical capabilities, the interviewees emphasized the importance of careful and rigorous human judgement (“We still have no substitute for the final judgement” **I2**).

AI can help with the organization and preliminary analysis of large amounts of data and documents but delegating detailed document reviews and interpretations to AI is difficult due to the need for contextual knowledge (“I don't see artificial intelligence taking away that heavy burden of reviewing all the documentation, everything you produce.” **I8**). Also, this technology isn't prepared for more complicated problems that change rapidly and require a flexible and innovative approach (“These complex problems that customers sometimes ask to us, I don't see artificial intelligence solving them” **I8**).

To sum up, Critical Analysis is becoming increasingly important as AI continues to transform the field of consulting. This knowledge is essential to ensure that the work done by AI is always verified and not blindly accepted, so that AI errors and hallucinations are identified so that they don't undermine business decisions. Even though artificial intelligence is very

efficient at many tasks, certain activities are exclusively the responsibility of humans and that AI does not yet have the contextual understanding to carry out.

5.2 Market specialization and customer communication

Based on the interviews and the thematic analysis carried out, the need for market specialization and client communication has become a key competence for consultants trying to adapt to this era of artificial intelligence. They emphasize the importance of focusing more on knowing each client's business, which results in greater contact with them.

Currently, most consultants have a more technical and analytical role than client contact. However, with the automation of most tasks and, consequently, the freeing up of many hours of work, it will be crucial to invest time in client-company relations and boost the development of new business (“more time to do other things, namely to invest more time in customer relations” **I9**).

In addition, according to customer needs, customers will demand more accessible communication and clearer, easier-to-understand guidelines (“entrepreneurs will want to be advised, so they'll look to a consultancy firm... and they'll want to be much closer and have more accessible communication that isn't technical” **I1**), which, despite the great advances in AI, cannot yet be replicated by algorithms (“...At least until now, we haven't been able to transmit to computers, to these algorithms, a set of things that have a lot to do with the interpersonal relationships we have with each other...” **I2**).

On the other hand, the interviewees stressed the importance of specialization and in-depth knowledge of the client's business (“you need to have knowledge of the client's business, area of operation, know the products, the structure” **I5**) so that consultants can offer differentiating knowledge that artificial intelligence alone cannot replicate. This in-depth knowledge of the business will ensure that the consultant can better understand the client's challenges, needs and opportunities (“the consultant has to specialize more and look at the problem, understand the problem, understand the client above all, this is crucial.” **I8**).

A consultant's ability to delve into a specific market niche offers a competitive advantage that generalist technologies cannot. This specialization is essential for the consultant's advice to be more strategic and tailored, and not just technical (“you look at a consultant who understands retail and that is the value that ChatGPT will never be able to give. ChatGPT has general knowledge but it will never be able to tell Sonae how to run promotions.” **I6**). On the other hand, to what happens today in areas such as “Business Consulting”, where

new hires in the company don't have a great deal of specialization, it will be necessary for them to adapt and develop a more focused specialization, to guarantee more impact and relevance for clients (“the more business consulting areas that have more contact with the client, when they came in they didn't have much specialization and now they're going to have to start focusing more on one type of market” **I10**).

In this way, the ability of consultants to adapt, specialize and interact with clients is essential if they are to remain relevant and indispensable to the future of companies.

5.3 Strategic Capacity

Traditionally, consultancy work involved a great deal of raw data analysis to generate insights, however, as AI takes on responsibilities related to data processing, the role of the consultant transforms significantly and Strategic Capacity stands out. The focus shifts to the interpretation and strategic application of the information generated, rather than technical execution.

With AI in charge of processing and analyzing large volumes of data at a speed and precision that significantly exceeds human capabilities, consultants will see a huge reduction in the time spent on more analytical tasks (“you'll spend much less time on the analytical part” **I7**). Consultants can redirect their focus and resources to high-impact activities, which increases efficiency and speeds up operations.

Strategic advice is becoming crucial because AI is taking over analytical tasks and traditional skills are no longer enough to distinguish consultants from the market (“The only way to stay relevant is to have skills that until now probably weren't considered so important, such as strategic counselling skills.” **I4**).

This focus on strategy allows consultants not only to process the information generated, but also to generate deep insights into decision-making “The most basic part of data analysis will be lost, but people will have more time to do more complex analyses, much more strategic, and that's exactly what is intended” **I7**). In addition, the interviewees also stressed that the real skill and added value that a consultant can offer lies in the ability to make strategic decisions, due to the abundance and democratization of access to data and information “Consultancy is particularly affected by this need for data and the decision that goes with it, i.e. if we have a lot of data and anyone can have that data, we need to make a decision” **I1**).

So, the consultant of the future will no longer work as a data analyst, but as a strategy architect, playing an important role in how companies understand and use data to gain a competitive advantage in the market.

5.4 Prompt Engineering

According to the results of the analysis of the interviews, the interviewees emphasize that Prompt Engineering skills are an essential specialization for dealing with the rapid development of AI. The transcripts emphasize the need to understand language models but also the ability to create precise and effective instructions to ensure good responses and to direct these models. This Prompt Engineering skill, or in other words the way humans interact with AI, is considered essential for extracting useful and relevant answers from AI models.

The first step to maximizing the potential of AI is to understand how language models learn and work. Consultants need to understand how machines think, react and interpret data to maximize their use of them (“you have to have a profile that understands how the machine thinks, how it reacts, what are the ways it interprets the information it's being given” **I5**). However, this knowledge is not limited to technical and IT professionals, but also to business consultants (“But it's important that people, what we call business people, who are non-technical, business people also understand the care they have to take when asking questions and making requests.” **I2**).

In addition, it is essential to understand the value of continuous learning of the language models themselves, so the more data and examples provided to the model, the more accurate and relevant the answers produced will be (“the more education you give the model, the better the result, because it will already tell you if I'm going to go there, and I think it's also a way of learning from the models themselves” **I8**).

Despite the importance of knowing the language models, the effectiveness of AI responses depends on how the prompts are executed. As a result, the transcripts emphasize the fact that prompts must be formulated correctly to ensure that the AI produces more assertive responses, i.e. the more information that is sent and directed, the better the response will be (“You have to ask the right questions so that he can answer you in the right way and solve the problem” **I3**). To tackle complex problems, consultants need to understand the client's need and follow the targeted instructions, breaking the problem down into simple instructions to get more pertinent answers (“you need someone who can break the whole problem down into prompts” **I5**).

In this way, we have concluded that investing in a specialization in Prompt Engineering is not only a useful choice, but also a necessary strategic decision, just as mastering English became essential in earlier times (“As for prompt engineering, it's going to be a necessity, just as English was a while ago” **I7**).

5.5 Updating and knowledge of Artificial Intelligence technologies

In a world of constant technological evolution, there is a need for consultants to keep up to date with the different AI technologies.

The interviews clearly showed the need to interact naturally with the models, as well as a basic technical understanding (“but we're going to have to be able to interact with these models in a natural way” **I9**) and continuous adaptation to new technologies to maximize their use (“we have to adapt, we have to know how to make the most of this technology” **I9**).

In addition, the interviewees highlighted the importance of consultants keeping up to date with trends and advances in the field of AI to keep pace with rapid technological changes over time (“Therefore, being super up-to-date on trends, everything new that technology is bringing and the advances.” **I2**).

To understand the functions and potential of the tools, you need to have a minimum knowledge of them (“they're going to have to have a basic knowledge of artificial intelligence tools, what they can bring, so that they can then take advantage of them.” **I2**) to ensure that consultants not only use the available tools properly, but are also able to identify new applications and opportunities for their clients so that they can anticipate and adapt to technological changes. In this way, they guarantee a more strategic and future-oriented consultancy service (“has to give strategic advice, but that involves technology. So they have to be up to date and understand enough of the technology to be able to do that counselling.” **I4**).

In conclusion, consultants who want to remain relevant must dedicate themselves to this change and make the most of it. It's important to understand the new technologies and be able to anticipate and adapt to future changes.

6. Limitations

In all research projects, there are limitations that can affect the results obtained and their conclusions. This chapter will explore the limitations identified in this study on the impact of artificial intelligence on the future skills of consultants. For this study, interviews were carried out with 11 consultants selected based on their experience and their contact and knowledge of the field of Artificial Intelligence.

Although this interview methodology has brought numerous positive and valuable insights to the study in question, there are also some associated limitations. One of these limitations is the sample of only 11 interviewees, which, being such a small sample, makes it difficult to generalize the results.

The use of larger samples in qualitative studies allows for a more comprehensive and diverse view of perspectives and experiences, whereas a smaller sample may not be able to capture the full range of concepts and complexity of the study.

Due to the size of this sample, it is not possible to explore different areas of consultancy practice, limiting conclusions about the skills needed in different areas that are also affected by Artificial Intelligence.

This homogeneity of consultancy areas may restrict the generalizability of the conclusions, since different sectors of activity may require different skills.

Furthermore, given the rapid development and constant updating of this emerging technology, it is difficult to predict how this technology will impact the competences of consultants, having been a challenge for the various interviewees to predict the future competences needed.

Finally, the fact that the interviewees answered the questions in a subjective way based on their experiences and perceptions, without being 100% aware of how AI can transform their roles and the world of consulting, may result in less universal and partially biased conclusions.

7. Future Research

In the analysis and results chapter of this study, it was noted that specific competences for consultants are increasingly important due to the effects and transformations of AI in recent years. However, the limitations mentioned also show that further research should be carried out to improve the aim of this thesis.

As a result, this chapter will present some suggestions for future research that can complement and enrich the conclusions of this thesis and help consultants develop skills for the future.

The first recommendation would be to carry out this study with a more diverse sample of consultants, with professionals from different fields, ages and levels of experience. With a larger sample, it will be possible to obtain a more comprehensive view and guarantee a wide variety of experiences and perspectives.

Future analysis is important due to the constant evolution of artificial intelligence and the effects it has on the field of consulting. This will allow consultants to examine the emerging skills required and ensure that they remain up to date with the latest technological inventions.

In addition to the suggestions above, some concerns arose throughout the interviews about ethical and privacy aspects of using customer data. Therefore, it would be important as a future study to examine the ethical challenges that arise and identify possible strategies so that professionals can use these language models without losing the trust of clients and the integrity of the profession.

8. Conclusion

The consulting sector has been one of those impacted by the enormous evolution of Artificial Intelligence. Despite the various obstacles that have arisen, Artificial Intelligence's ability to handle large volumes of data, automate repetitive tasks and save time on most activities is transforming the role of any consultant. And although there is already some knowledge about the impact of this technology on consultancy, there is still a lot of ignorance about the challenges they will face and how it will impact the sector.

However, even with some limitations, it was possible to compose the literature review with information on how this sector and the competences of consultants are changing.

The literature review showed that AI is becoming more common in consulting practices, highlighting its significant impact on process automation and data analysis. In addition, some challenges for consultants were also identified, emphasizing the importance of professionals learning new skills to adapt to an automated and constantly changing work environment.

The research question **“What will be the future skills of consultants with the impact of Artificial Intelligence?”** arises from the need to understand, in the face of all this rise of AI in the sector, all the emerging opportunities and challenges, how consulting professionals can prepare themselves and what the future competences required will actually be.

The interviewees concluded that Artificial Intelligence improves the efficiency of consultants' work, recognizing that it allows tasks to be carried out much more quickly and accurately and that this provides a significant advantage for the consultancy.

Furthermore, the conclusions drawn from the interviews and consequently from the thematic analysis highlight several key competences for consultants.

In particular, **Critical Analysis** was highlighted as a crucial skill, since, although AI is effective in handling large amounts of data, consultants must have a critical spirit to ensure the veracity of information and data by AI, especially in the face of AI's limitations and possible errors.

Market specialization and customer communication have also emerged as fundamental due to the need to invest time in gaining in-depth knowledge of each customer's business and improving customer relations, while freeing up the time previously spent on analysis. As AI begins to perform analytical tasks, **Strategic Capacity** becomes more important because the role changes from basic analysis to decision-making and strategic insights.

The **Prompt Engineering** domain has emerged as an essential specialization to deal with the rapid development of AI, emphasizing the importance of understanding language models and formulating precise instructions to obtain relevant answers.

Finally, continuous **Updating and Knowledge of AI technologies** is essential for consultants to remain relevant. It's important to adapt to technological changes and understand new tools in order to anticipate new opportunities for clients.

In conclusion, it is essential that professionals are prepared to deal with difficulties and take advantage of opportunities that arise, as well as the extreme importance of continuing to reinvent themselves and learn, because only in this way will they be able to become relevant and successful as consultants in the future.

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Appendix

Table 7: Key Excerpts from Interviews

Miguel Botto – I1
- “We will definitely have to know how to communicate with Artificial Intelligence otherwise we will be pawns, this is a mandatory item to give value to the company” - “It's going to be the people who get better at adapting exactly who master Prompt Engineering, so communicating with artificial intelligence, which is communicating more assertively with AI, is going to get you the desired result faster and more efficiently, and from there you're going to get better responses.” - “And if you don't know how to communicate assertively with artificial intelligence, I'm simply going to be left behind, to be independent of the machine, I ask you, what does the entrepreneur need the consultant for? - They don't, because they'll click the button and get the same results. The consultant has to know how to communicate” - “In order to have more efficient, more precise and more personalized results according to the needs of the entrepreneur and, from there, to be able to interact and help the entrepreneur to develop a better strategy.” - “On the other hand, we also have digital automation, which is basically automation without code, which is also here to stay. Anyone can access it, including small businesses, which will remove the need for programmers in the traditional sense that we know them.” - “They're also going to have to reinvent themselves because today if I want to create any problem I don't need a programmer and I don't know anything about that language, the ChatBot will give me the whole program and the steps I have to take” - “...it's essential for consultants to know how to communicate assertively with Artificial Intelligence in order to have answers that ordinary people don't have, whether as businesspeople or as consultants.” - “Consulting is particularly affected because of this need for data and the decision that goes with it, i.e. if we have a lot of data and anyone can have that data, a decision has to be made and the consultant no longer needs to go after the data.” - “I've worked in several large companies and collecting data used to be hours and hours of annotating documents and this document and that one. And if all the information is going to be automated, it's going to be computerized, then the data is already there. The consultant's

job will be different, it will be to help with the decision and the strategy and it will be how to compile this data to meet the needs of the client - the company.”

- “Then artificial intelligence allows us to process a lot of data - as I said it's a great speed and the speed is basically in real time and this is a very important bit because from here conclusions come that are absolutely relevant for making decisions in real time.”

- “Then artificial intelligence is also made with advanced algorithms that have a learning process, what we talk about as the learning machine, as we take the data from the machine, it learns that we want that form and we deliver it the way we educate it, as we train it.”

- “Lastly, their role in strategic decisions, this is a strong aspect that the consultant is going to position themselves in, which is that on the one hand they're going to see great savings in time and resources, right in this compilation of data and also in the first part of the analysis, effectively used in more complex problems, and then they'll be able to bet their service on more personalized solutions, so it's no longer that everything from the garbage to the construction is the same, it's copper, the company is going to have its own data and then it's going to have to reset the solution, it's going to have to be signposting, and more and more companies are going to want this personalization of doing business.”

- “The consultant will no longer be that person who appears from time to time, but will become an integral part of the same strategy and it's a very interesting point that fits exactly with the profile of the future consultant that not everyone has because we know that most consultants today have a more analytical profile”

- “That's the profile that's going to change, it's no longer going to do anything, what matters is focusing much more on the strategy of results for the specific company, so there's going to be a specialty of a consultant in a finished niche, so that he can understand the market trends of that niche, which is to then adapt the personalized results of any company to that specific niche.”

- “Entrepreneurs are going to want to be counselled, so they're going to look at a consultancy firm as a consultant who actually knows the data and that the future of the business could be there, so they're going to want to be much closer and have more accessible communication that isn't technical, which is why graphics and mind maps are fantastic for presenting to anyone who doesn't have to be technical.”

- “The consultant will then act as an advisor to businesspeople so that they can prepare themselves for trends and go further, not only on the basis of their data, which provides a

line of service, but also to take account of the niche market itself and also the national and international situation.”

- “...any entrepreneur won't want this kind of consultant? everyone will, is artificial intelligence going to do this job for now? No! It's not going to do this job! It's going to help do this job but it's not going to have this language in a simple way, like what do I have to do tomorrow, it's not going to be able to...”

- “Look, I'd say it's going to do everything that the overwhelming majority of consultants do today and that's why I was saying that the profile has to be changed and have a more strategic profile because the analysis is going to be done by artificial intelligence”

- “As artificial intelligence develops and learns how to analyze data and what it has to combine in terms of data, it means that it is evolving in terms of analysis. When it evolves in terms of analysis, it doesn't need a human, so where will it need a human?”

- “So the profile is going to change completely... one wants results and I want the other to help get results and the other just wants documents and data and then they're going to draw a conclusion, now that's what AI does, so that's not the way forward and that's clearly going to end, in my view, that is, the technical and profile component is going to be much more on the strategy side and I think that's going to be a major development for the next human beings”

- “On the other hand, it's also very interesting that by not needing these analysts, consulting companies will considerably reduce their costs with the number of consultants, which opens up another possibility... instead of working only with large companies, it will create new markets in medium and small companies, because they will all want someone to help them with their growth strategy.”

- “For me, analysis tends to end in the long term. In other words, what I'm talking about is what's trending in the long term, the problem is - what is the long term? If we're talking about traditional times, it could be 10 years, the problem is that we have a vertical learning curve in artificial intelligence itself that is accelerating everything, what was January last year in terms of artificial intelligence is now totally obsolete.”

- “Nothing is being done to help human beings adapt to this speed, but the tools available and made available to human beings are there and they're growing by leaps and bounds, which means that without even realizing it, we're being replaced by artificial intelligence.”

- “What does an entrepreneur want? I want someone to tell me what strategy I need to define and to explain it - how? - in a simple way - present the graph, present a mind map so I understand and the rest I follow, because that's my job as an entrepreneur.”
- “Another wish - I don't care about books and documents and data and pages - I don't need any of that pretty stuff that just sits in a drawer and nobody reads it and I can't even use it, me as an entrepreneur, so I want someone to summarize for me what I have to do.”
- “...another wish is to be able to do it in real time, in other words I don't need to have accumulated data for I don't know how long because then when I go to work in the market it's all out of date, it's past, it's no longer as effective as I wanted it to be, or because a war happened, or because there was a flu, an epidemic, or because the political power changed, or because the law changed, in short. And he, the entrepreneur, wants to have someone he can trust and consultancy firms represent just that, they represent that trust.”

Carla Cardoso – I2

- “I started working in Data Science, or at that time it wasn't called Data Science, it was called Data Mining”
- “Building predictive models, segmentations, so what we currently call traditional AEO”
- “So everything related to structured data, at the time there wasn't even much training in unstructured data. I evolved, at the time I was working at a bank, I was working at NBCP, so I didn't even work in consultancy, it was only after I jumped into consultancy, after 6 years, that I went to work for Boston Consulting Group, in Madrid, and also in the Data Science area.”
- “Keeping the same thing, the same perspective of traditional artificial intelligence models on structured data.”
- “In the last three years I've been more in the area of artificial intelligence for unstructured data, in other words, data such as images and text, which is what has had the most boom in recent years due to computing power as well and these new techniques with transformers.”
- “It's like this, artificial intelligence is going to be in all areas of business and it even affects across the board, i.e. the public sector, health, industry”
- “The consultancy will have to adapt, it will have to respond to this, it's no longer enough to deliver a pure and hard analysis of what happened, such as some economic analysis of what each of the consultants thinks of what could be, or for example having a risk analysis, or even an analysis of investment suggestions based solely and exclusively on the experiences of

employees and consultants. It's always going to be more demanding for them to have a more fundamental component that is supported by intelligence that brings more information.”

- “Artificial Intelligence should not, in my opinion, replace our work. We have factors that allow us to look at the problem in a different way. At least so far, we haven't managed to transmit to computers, to these algorithms, a set of things that have a lot to do with the interpersonal relationships we have with each other, with the global perspective of companies within the market, they have a very large capacity for processing information that we don't have.”

- “It's always important to have this balance between the two...”

- “Another component that I hope will be part of the consultancy, and this is what I'm also investing in now, is to always have an ethical component associated with what you're doing, and therefore to have this balance between this relationship between what algorithms allow us, this information processing, this greater ability to identify patterns, to identify, to classify things, supported by our idealistic vision of what the market is, what the world is, and also where we want to go...”

- “So the questions...”

The questions should always be asked by us and then the answers can be supported by Artificial Intelligence.

But we should never, in my view, not delegate the questions to Artificial Intelligence because it's not prepared for that part, where I should go.

It's prepared to process everything that's already been done.

That's why there's a very big risk, and there's a lot of talk about biases, because they're always chewing on information that already exists, patterns that have already existed, but we don't want to have a society of more of the same, otherwise we'd be trying to evolve all these things.

We want different things.

So we have to be the ones to derive why, where we want to go, but always supported afterwards.

We have something there that can chew through information in a much more optimized way.

Okay, let's take it from there.

And then, in the end, we make the final decisions.

So that's how I see artificial intelligence taking part in our business world.

Consulting can't be left behind.

In fact, I think companies always expect consultancy to be ahead, never behind.”

- “So we have to do it, invest, take risks, spend money, because artificial intelligence often spends more money than it generates at the beginning and that's part of it, that's the process.”

- “For non-tech consultancies there is a very interesting opportunity to start having these components here, to be able to take advantage of them without having to deviate too much from their core business and now have a huge technology team.

For technology consultancies, they have a new baby to play with and they can do a lot more things here. So there's a lot of potential here.

The only risk, perhaps more so for technology, is that many of the advances are already out of their hands.”

- “...A profile that is going to enter the job market, even if they work in consultancy and auditing, is going to have to have some knowledge that isn't just going to be office knowledge, it's also going to have to be about these tools, from a usage perspective.

Of course, they'll also have to understand the risks.

And he'll know how to use it, and he'll always have a specialized technical team to support him, but he'll have to have this basic knowledge.

Otherwise, you'll always be at a bit of a disadvantage because you don't have access.”

- “Yes, but you have to know how to ask the right questions, so you have to know how binomial algorithms work.”

- “But it's important that people, what we call business people, who are non-technical, business people also understand the care they have to take when asking questions and making requests.”

- “So they're going to have to have equipment with basic knowledge of artificial intelligence tools, what they can bring, which is to then take off”

- “Basically, they have to understand all the opportunities opened up by these new technologies and they have to keep up with them very well.”

- “Therefore, be super up-to-date on trends, everything that technology is bringing new and advances.”

- “The fact that we can delegate data processing through artificial intelligence means that we have more time to do a lot more research or critical analysis.”

Manuel Adegas Henriques - I3

- “the more traditional consultancy, that is, a lot of strategy, working with PowerPoint, presenting results in Excel, that's where these integrated tools are going to completely change the consultant's life and why? Because tasks that you used to spend a lot of time correcting in Excel, for example, will now be much quicker with Co-Pilot because it will basically think for you and you just have to give it the right command so that it gives the most accurate answer in reality.”
- “You have to ask the right questions so that he can give you the right answers to solve the problem”
- “Companies won't need a person with advanced Excel skills as much anymore, it's not because a person, along with ChatGPT, has the technical component, if they know how to ask the questions according to the business need, they'll get the right answers.”
- “The consultants will have to focus on the most functional part of the problem”
- “it will certainly reduce the workload you had on some tasks, but then there will be a lot more”
- “I think a very important thing is mastering Prompt Engineering because you have to know how to work with these tools just like any other tool, because it's a tool that uses natural language, so it's a language we all know and we don't need to learn new programming languages... so it's going to be easier to learn, but whoever manages to work better with Prompt Engineering is going to have a competitive advantage at work, without a doubt.”
- “There will have to be functional work, in the business sense, but the only thing you don't do is program in the language behind it”

Arlindo Oliveira – I4

- “Artificial Intelligence has an impact on all areas. Which is to say in a positive, alternative way. I think it's more positive than negative. I think it saves people work, to make me more efficient”
- “A consultant who can use artificial intelligence will be able to analyze documents more quickly and be more effective in the recommendations they make. In general, artificial intelligence will increase the efficiency of consultants.”
- “...finding the relevant information in a large set of documents. So I think these are tasks that will typically be enhanced, possibly accelerated.”

- “They have less work to do in analyzing the data and more to do in making strategic recommendations.”
- “...I think there needs to be greater specialization in various market niches in order to be competent, and that's what you think is a more out-of-the-box approach.”
- “The only way to stay relevant is to have skills that until now probably weren't so important, such as strategic advisory skills.”
- “The systems, at least for the time being, are not at the level to guarantee results.”
- “I think it's important to realize that the consultancy business is based on the ability of consultants to bring knowledge that companies don't have, at the moment, with some artificial intelligence, it brings, despite everything, a democratization of access to information and therefore, it's very likely that consultants will update themselves in order to bring in these skills.”
- “So I think this is really the challenge for consultancies to stay relevant in a world where access to information is getting easier and easier.”
- “And so they have to understand enough about technology to be able to get these people to be able to do this reception.”

António Matos – I5

- “Artificial Intelligence won't replace you in practice, you always need a human. You always need someone to review it, to identify whether there are errors or not, and you increasingly need professionals with eyes that can see that the code is 90% but there's a part that's going to fail. Someone who can interpret all the hallucinations that GenAI has”
- “You'll be able to replace the juniors but the work won't be of the quality that we can produce. This isn't going to replace people, but we have to be aware that these tools exist, that they can speed up our work enormously, but that we can't slack off or get stuck because 90% of the work has been done. On the contrary, I'm going to have to worry twice as much because the work done has errors, has hallucinations, has inventions that are completely out of scope and don't do what is intended and so I have to test more, validate better, have a critical spirit 3 or 4 times sharper than the one I had before and we are needed”
- “They can simply produce more code, more work in much less time, that's the big advantage here”

- “Right now Prompt Engineering is crucial, and you need someone who can talk, who can converse, you need someone who can interpret a technical requirement and turn it into something functional, they just have to be able to explain it to the machine”
- “Right now you need a Prompt Engineering profile, someone who can break down the whole problem into prompts. Prompt Engineering is someone who understands the machine, knows what it can deliver”
- “As a consultant, your work has tasks that you'll have to mouse and read and you won't be able to do it any other way”
- “All the requirements gathering and the preparation of technical and functional documentation will have to go to AI because that's time the consultants are wasting. We ask the machine for a start, an outline and then we go and read it, identify what's missing and then complete it.”
- “You accelerated your work and instead of presenting the project the following week, you did it the very next day. It's about speed, you'll always have things to do, you just have the ability to do them faster”
- “There are projects that will be cheaper for the client and more profitable for us, because maybe you'll charge more than you currently do because your employee knows GenAI so it's more valuable, but for the client it's worth it because instead of needing 5 people to do that job, now you only need 2 people.”
- “What we have to do is train our people well to be able to use these tools and that's what we're working on at the moment, trying to develop the right tools to make things go faster”
- “We need trained people with knowledge of data, because information works through data and we've always worked with structured data and right now you have a new aspect here, which is unstructured data, which is where 90% of your information is, in meetings, emails, everything.”
- “To be very open-minded in the face of this great evolution in Artificial Intelligence and to know how to adapt”
- “Things are simply going to change and what we do today, in 5 or 10 years we won't be doing anymore and there are things that are going to happen faster and the profiles will obviously have to change”
- “We're going to have a very business-oriented profile, the Tech profile will probably be forgotten a bit more”

Vasco Pena Monteiro – I6

- “From the person who makes powerpoints, to the person who writes emails, code. And we're only seeing the tip of the iceberg, I don't know if you ever touched an iPhone in 2007 but it didn't do anything. It would open a web page.”

- “for non-technical consultants, the way you ask the question is very important, and then you get a correct answer. Imagine, on ChatGPT there are a lot of keywords that greatly improve the quality of his answer”

- “You should answer the email automatically. It will stop doing tasks that you don't know about.”

- “The fact that you can analyze data faster makes it possible for you to stay more on the strategy side, which means that analysts who join in the first year focus a lot on the data analysis side and then have little work on the strategy side.”

- “I agree that automated tasks should be automated, but if you're going to give LLMs all the knowledge you have from meetings with clients and then the exact output they want with the data and analysis they want, I doubt it. But the point is that whatever you can automate, you will automate. But that doesn't mean that people will have more time or free time for strategy, but there will be other tasks that will be important.

There was no industrial revolution that ended jobs, but there will be other functions in a year's time that you don't have today.”

- “Because our technology team is starting to specialize earlier and earlier, whereas in the past anyone would take on a technology project and get on with it. Nowadays it's not like that, people are starting to specialize! However, BC people are becoming more and more specialized, you look at a consultant who knows retail and that's the value that ChatGPT will never be able to give. ChatGPT has general knowledge but it will never be able to tell Sonae how to do promotions. Bringing value that can't be automated.”

- “It's still a bit difficult to define and it's only when artificial intelligence evolves that we'll be able to understand what the consultants' skills will really be”

Hervé Silva – I7

- “This will accelerate the need for specialization because ChatGPT will already be able to do most things”
- “code generation is one of the things that works very well because there's a lot of code available on the internet but when you go to new things those models are no longer going to have that leverage”
- “The most basic data analysis will be lost, but people will have more time to do more complex analysis, much more strategic, and that's exactly what we want”
- “... and in light of this, I don't want to say that we won't need analysts any more, we haven't said that, what we have said is that, at the end of the day, we can now do more applications than we did in the past because the number of hours spent will be lower and, as a result, the quality will be better.”
- “the consultant, even with AI, has to have very strong know-how, niche knowledge in order to be effective”
- “Artificial Intelligence will accelerate the need for specialization in the area of Advise and customer contact
- “As to prompt engineering, it's going to be a necessity, just as English was a while ago”

João Barros – I8

- “You can take away those more routine tasks, so to speak. A presentation of a proposal, for example, that standard template helping all that, doing that first shot, I think that can help a lot.”
- “I don't see artificial intelligence taking away that heavy burden of reviewing all the documentation, everything you produce.”
- “It can be an accelerator, yes. It doesn't do any more than that, right now, with the artificial intelligence we have and above all with the large language models.”
- “The future of the consultant, and in a very concise way, is going to be very difficult for the entry levels, for the entry levels, because they're going to be left with that job that nobody wanted, aren't they? And that work that nobody wanted is likely to be passed on to artificial intelligence”
- “These complex problems that customers sometimes ask us, I don't see artificial intelligence solving them”
- “I'm not saying that in a year or two this will change so quickly.

I'm not saying that in a year or two's time, my opinion won't change, but right now I'm seeing a lot of that, the consultant has to specialize more and look at the problem, understand the problem, understand the client above all, that's what it is"

- "The customer wants one... says he wants one thing, really wants something else and is willing to pay for something else, so artificial intelligence won't make this distinction."

- "Those very technological profiles that we now have in all the consultancies will be profiles that will find it more difficult to embrace the future... consultants may find it more difficult because they are very attached to that part of the code, which helps them a lot, but trying to have another attitude and give them another opportunity ends up being a little more difficult"

- "Right now, the code, the chat-gpts are already waking up all the code, it may not be as optimized as it could be, but it gives you a code in 5 minutes, when you have here, maybe a normal person would spend 2 days doing it"

- "I've tried several models, and the finer you are at Prompt, the better the result you get"

- "So the more education you give the model, the better the result, because it will already tell you if I'm going to go there, and I think it's also a path of learning for the models themselves"

- "The models themselves are going to have to learn from people, they're going to have to accompany people so that they can find a solution more quickly. Then you have a problem here, bias in the models themselves, because if a person always uses the same model, and it's always giving them the same indications in the way they want, then it will always give the results in the same way"

- "So here we have this problem of bias towards results, it's going to be complicated in the future, but there's nothing like a critical spirit, which is why I'm trying to tell you that the profiles are going to be much more linked to the business, rather than the technological part."

- "You have to know the client, you have to know the type of business you have, in the end you tell us people and this is a people-to-people business."

- "So here you always have this much more social component, which artificial intelligence probably won't adopt so easily"

Daniel Belém Duarte – I9

- “If we have more free time, it means that we will end up having more time to do other things, namely to invest more time in client relations, to find new opportunities to do other types of business.”
- “How we're using generative AI and AI within consulting and what we're doing with clients. First clients are still learning a bit about what this is.”
- “we're trying to put together a solution, a use case, something that will allow us to speed up our delivery of a certain service that may have nothing to do with GenAI.”
- “How can I be more efficient in delivering a certain type of service to a client? We use GenAI, whether it's market solutions that already exist, like Github Copilot, to develop code, like Microsoft's Office 365, other solutions that may exist, what other things can we do, from creating Power Points and documents automatically to summarizing the status of a project. Or speeding up code conversions, for example, that we have to do”
- “The prompt engineering competence is going to be highly relevant. I think there are other skills that perhaps have been very relevant so far, but data engineers, because I think these people are relevant. They're relevant because in order to be able to work with this data and make prompts about the data, you're going to have to have it, you're going to have to be able to organize it.”
- “And so, this competence of what data engineers are, pulling data from systems, manipulating it, preparing it, even here, this data works as unstructured data.”
- “Until now, a data engineer would typically take a database and always work with structured data. And how do you manipulate unstructured data? PDFs, images, videos, how it's handled, this is something that's going to be highly critical.”
- “This work of organizing unstructured information is going to be more and more relevant, okay? It's really going to be more and more relevant. Prompt engineering is really a technique at the end of the day, the way you interact with models.”
- “I think it's that you could go knocking on people's doors, it's not just about strategy, it's about go-to-market strategy, you could go knocking on customers' doors more regularly, it's not just about thinking about strategy, thinking about offers, thinking about different approaches to addressing issues, completing with customers, all of this will give us more time to do things with more quality, without forgetting, the part of the critical spirit to do everything that is provided to us by artificial intelligence.”

- “Because this part of having the code much easier now, and having access to all the corrections, means that we have to have a redoubled eye and this critical spirit to really see what is important to us and to apply to the customer”
- “You have to know that what you're analyzing is a client and it's a client who has a bank account and you look at the tables and you can understand more quickly what you're looking at and draw insights much more clearly than someone who has never seen a bank database structure. They may be different, but at the end of the day, you have a lot in common”
- “We have to adapt, we have to know how to make the most of this technology, because what I always say is artificial intelligence and what we have is not going to replace us. But what will happen is if someone like me uses GenAI and I don't use GenAI, that person will replace me, because they'll be faster, they'll be more efficient, they'll be much more productive than me, so maybe I'll be needed.”
- “In other words, it's not just going to be us and you were right, it's not just going to be us taking advantage of the solutions that already use GenAI within the solutions themselves, but we're going to have to be able to interact with these models in a natural way”
- “It's important to know how to ask, it's important to know what you want to search for and the way you search also influences the small results”
- “And so you knowing and people knowing how to use and work with this technology is going to be mandatory.”
- “I'm not sure what's coming obviously, but I think there are the issues of the prompt engineers and how you interact with the models is going to be highly critical.”

Hugo Cláudio – I10

- “And the impact of Artificial Intelligence, which is no longer new, but which has been growing steadily on the part of Generative AI, which is one of the sub-chapters in terms of AI, you're going to support different types of consultants or different types of practices with more or less depth... It's going to have a different impact on someone who's from Consulting compared to someone who's from Tech.”
- “It's a hat that's been used for a long time, more in machine learning, deep learning, very much linked to these types of concepts and perhaps in recent months it's changed a lot with this GenAI issue and that's going to impact consultancy but the business environment in general”

- “And these questions often come up: am I going to cut jobs? Am I going to reduce consultants? Am I going to reduce teams? When I think the big issue is adapting to working with this technology. We have an opportunity and not so much a problem”
- “It's going to help us gain knowledge more quickly, but also each of us will have a work assistant who will make us more efficient in carrying out our activities”
- “The problem is that we don't always know how to ask the questions and how to imagine, these bots say a lot of things well but they also hallucinate a lot when we don't ask them properly”
- “In consultancy, we have to be able to use this technology, it's not such a simple thing but at this stage, through pure natural language, through a prompt we can get an answer”
- “I think it's going to be important to upskill consultants globally, both at a business level and from a technical point of view, in order to be able to use this technology across the board.”
- “Each person's talent will have to improve to be able to use this technology, point 1”
- “I'll definitely become more efficient and there are a number of activities that I'll be able to speed up or replicate”
- “In business consulting, today I have an assistant who can summarize a document very quickly, but once again, we have to be careful with the documents we are using”
- “If it's a powerpoint full of photos, graphs and columns, the assistant won't be able to use it to its full capacity and sometimes won't even be able to give an output”
- “But upskilling consultants isn't going to be useful for any activity you're doing, activities that require you to analyze documentation, very focused on analyzing graphics or images, we find it difficult to pass that on to AI”
- “Ability to help you with the code, so this will help you a lot in the programming and application development activities in consultancy, in other words, you'll have an assistant who is able to suggest different ways of coding your application or your process. He'll not only be able to suggest it, but he'll also be able to develop part of it. They'll be able to help with testing and these are just a few examples of the radical change”
- “It speeds up software development, which is a very important issue, in addition to the robustness and clarity of the code”
- “Nowadays we've even created a handbook with tips for clients on how to work with the LLM we've made for the company”

- “Technology is evolving very fast in this ecosystem but we are also coming across situations, when we are putting them into practice in day-to-day cases, that also have human behavior”
- “We have analyzed that a model like this, when it has to analyze 100 reports, some of them with 400 pages, when it goes to summarize, when it's in the final part it no longer remembers the intermediate content, and this also generates some concern”
- “And that's why we've also been detecting this and I wanted to share it with you, that it's a topic that's really going to be an assistant, it's going to be an accelerator, but due to a question of gaps that I think are going to be mitigated, it's still not 100% reliable”

Sérgio Ferreira – I11

- “So there are two fundamental conceptual skills here. The first is what we call empathy. Why is that? Because if machines are going to do a large part of what are our repetitive tasks, this will potentially free up time for us to do something that normally in social orders is what we say is the most important thing to do but we never have time for”
- “Which are relationships between people, developing people, motivating teams, managing and developing them and having time to think about the future and creativity which is linked to what normally takes a back seat, because the day-to-day and operational tasks eat into the strategy”
- “This is one of the important things, which is this idea that empathy, which is this ability that we have and that I believe machines won't have in the near future, to be able to perceive others, understand others, create relationships and what we, the new operating system of organizations, which is a new culture, a new way of and a mentality led by AI, by artificial intelligence to automate our repetitive tasks but, at the same time, this culture is a culture of people relationships.”
- “The second important aspect of training is that we're going to have to work with machines, so this is going to be a reality. These machines are different from the ones we know because we had a need to talk to machines through code programming, so they have to be programmers or data analysts, data engineers.”
- “The democratization with natural language will allow this to have another perspective, which is that all people, even those who are business people, who are not technological, can potentially deal with these machines and solve their problems, which before they had to do

here to be here. And so there's a new capability here, which is this idea of computational thinking. And underneath this computational thinking are two things.”

- “One of them has to do with my more analytical capacity for data. Today the world lives around data, which we need to transform into information, information and knowledge, knowledge and intelligence. And this is done by structuring it in the way that machines think, ok, I'll do this, then I'll do this, then I'll do this, so I think more about structuring and computing, as we have and as machines think, so that we can easily know how to talk to it. Because today we have a lot of things, we're all talking about prompt engineering, prompt design, prompt tuning, but this isn't about giving instructions, it has to be a conversation. And to have a conversation with a machine, it has to be structured.”

- “That's why what we do best when we talk to people now is to give them this perspective of computational thinking, where I have to realize that having a more analytical and structured mindset is fundamental to getting value out of these new tools.”

- “Consultancies are essentially training and career schools. People come straight here from university, and the way we use them is to teach them how to do things, potentially even tasks, which as younger people we don't like to do, but it's the best way for them to learn. And that's why Learn By Doing in a consultancy is really 70% of the time. That's why we have a rule that we follow, which is in the books, which is that 70% of people we train to do, in other words, learning to do Learn By Doing, then 20% is learning from others, who are the more senior people, and 10% is formal training.”

- “Where do I think the big challenge lies, here and in other industries? It's that today there are a number of things that we do, and that we've learned from others, or learned to do, that we're potentially going to be tempted to go to Chatgpt, or Claude, or Gemini, and ask them for the answer. What we're doing very hard is that once again there's a huge opportunity here to transform the way we train people.”

- “So we're teaching people to ask machines questions, what they should ask is, how do I calculate what are the steps to know the result of 425 divided by 5. And this is a great opportunity if it's done well.”

- “Now I have to know how to ask the right questions. Once again, a phrase I use a lot. In this age of artificial intelligence, it's no longer just important what we know or learn, but what good questions we can ask, or prompts we can create. And this is what will make the difference in how well we take advantage of these tools.”

- “Because if we just ask the questions, I get the result, it's a huge loss of opportunity. And that's what we're doing, we're teaching the people who come to us to use these fragments by making the right prompts. What I'm going to ask you is not to tell me which are the best companies on the market, in this area, because he's going to give it to me. What I'm going to say to him is, I need to do some research so that I can do benchmarking work on these measures, help me to know what the spaces are for what I need to do, which is to learn what the spaces are, and then also have the answer.”
- “CoPilot is a good tool, but what's behind it is very interesting. The CoPilot is clearly our co-pilot who is going to help us get to a certain place, but we are the commander. Once he's said that he's going to give this instruction, he's going to put the plane on level or off level, we're the ones who are going to validate whether or not it's going to change direction or go off level.”
- “It's just that they respond, but we have to be able to continue to validate whether it's OK or not. If we don't know and learn how to do this well, we're probably creating the next generation of consultants, who are dependent and addicted to their digital assistant, their CoPilot, or some other tool, that they can't see if they're doing it right or not.”
- “And we may be creating a world of immense errors that no one has the capacity to evaluate anymore because they have lost their knowledge. “
- “I have to continue to have the knowledge to be able to play whether he is producing the best content and whether it has quality or not.”
- “What I can say at the moment is that nobody knows for sure what the final design of this transformation is going to be. The things that are happening have too much unpredictability.”
- “Because if we're talking about the future right now, we call ourselves more plausible. But even before the pandemic and following all the analysts, there were things that we said we would only be able to achieve in 2030, and suddenly we see it in 2022. And that's why the acceleration we're experiencing raises caution”
- “I see the noise, I see it happening, but how do we do it? It's all this idea of uncertainty and fear and anxiety that exists in most organizations today.”
- “So let's be the ones waiting, let's be the ones waiting to see how this progress is going to be.”
- “The most important thing you can do today in your work is precisely to redesign your work.”