noesis

IT INSIGHTS

DIGITAL TRANSFORMATION AT FULL SPEED IN EDP COMERCIAL

José Pedro Figueiredo and Ricardo Henriques (EDP) share their views on digital transformation at EDP Comercial.

IT INSIGHTS

NOS MAKES A SAFE BET ON QUALITY MANAGEMENT

Duarte Nuno Diniz and Henrique Zacarias (NOS) share their views on the investment in Quality Management.

#SomosAltia

BUSINESS INSIGHTS

NOESIS JOINS ALTIA GROUP

Constantino Fernández (Altia) talks about the integration of Noesis into the Altia Group to refocus strategies and fulfil the objective of leading the European market.

Helping your business grow faster

We are an **international tech consulting** company, present in 6 countries, offering services and solutions to support clients in **digital transformation** and the **development of their businesses**.

We are focused on **infrastructures**, **software**, **quality** and **people**, with highly specialized talents and working with the most innovative technologies.

Infrastructure Solutions

Enterprise Application Integration

Enterprise Solutions

Low-Code Solutions

Data Analytics & AI

Enterprise Resource Planning

Quality Management

DevOps & Automation

Professional Services

Portugal · Spain · Ireland Netherlands · Brazil · USA

A YEAR FULL OF CHALLENGES!

Alexandre Rosa
Noesis CEO

> **At Noesis, our greatest challenge has been that of proximity, keeping close to our customers, the organizations that trust us and that rely on our capacity for innovation and quality of delivery."**

It has been an atypical year; we all know that.
A year marked by a pandemic that affected society, organizations, businesses, the way we work and how we relate to each other. We are facing a context of great challenges for organizations, not only in terms of resilience, but also in terms of change and even opportunity. Organizations seek to respond quickly to market changes, new consumer behavior, new organizational processes, with technology playing a key role in this adaptation.

Teleworking, for example, has presented new challenges for organizations, in terms of their IT infrastructures, but also regarding cybersecurity. The confinement we are experiencing "forced" organizations to look at the Customer Experience and their digital channels through different eyes. The competitiveness of the business has further awakened the companies' attention to the topic of data, analytics, and the need to incorporate that information into decision making. Also, not forgetting automation or Artificial Intelligence, which can make a difference in optimizing processes and improving the efficiency of organizations. As well as Agile development, using Low-code, which is one of the solutions that will enable organizations to adapt quickly to the new context.

At Noesis, our biggest challenge has been proximity, keeping ourselves close to our customers, the organizations that trust us and that rely on our capacity for innovation and quality of delivery. This is a time when, even though we are physically distant, we need to remain close to our customers and to work even harder

to overcome their challenges. Therefore, I would like to express my special thanks to the organizations that entrust us with this responsibility. And, to our staff, for their ability to overcome the obstacles, for their dedication and for their professionalism, in these challenging times.

This was also the year in which we joined the Altia Group. An integration that makes us stronger, joined with a leading company in Spain, quoted on the stock exchange, forming a business universe of about 2200 employees, and with a geographical presence in seven countries - Portugal, Spain, Ireland, the Netherlands, the United States, Brazil and Chile.

We have greater scope and are better prepared to face the challenge of internationalization. First, in Spain, leveraged by Altia's strong presence. We are already developing Quality Management projects and we have approached the market with our Low-code solutions, where our expertise in OutSystems technology is a differentiating factor. But, also, with the strengthening of our operations in the other locations.

In this edition, the President and CEO of Altia, speaks to us about the challenge of integration and the joint strategic vision for the future.

Also, we have not forgotten the challenge of growth. Despite the atypical year and the context of economic downturn, it is estimated that Noesis will increase its turnover in 2020, compared to the previous year.

Finally, the challenge of innovation. Being able to keep up with technology trends and incorporate new offerings, new solutions and new technologies. Despite the pandemic context, we followed up on this objective and launched the new Enterprise Application Integration business unit, based on a strategic partnership with TIBCO. After only a few months of activity, we achieved Elite Partner status and were distinguished as a Partner of the Year by TIBCO, which has positioned us as one of the main players of this technology in Portugal.

In a year of enormous challenges, I end on an optimistic note, with the certainty that, together, we will continue to overcome these challenges!

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Greater agility in business, less friction between front-office and back-office and better customer service are some of the benefits that Celonis technology ensures at EDP Comercial.

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Quality is one of the secrets of NOS's success. In partnership with Noesis, the company has been strengthening its commitment in this area and providing an ever-better service to the customer.

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In brief

LISBON DATA & AI FORUM ARRIVING SOON

Lisbon Data & AI Forum is the new name of the old Lisbon BI Forum, organized by Noesis and scheduled for November 19, totally redesigned and with a fresh face. In its fourth year, the initiative, dedicated to the themes of Data Analytics and Artificial Intelligence, counts, once again, with the partnership of Qlik but also brings plenty of innovation. In these times of pandemic, the event has adapted to the new reality and became virtual, but in addition, it will also have an extra day - the Campus Edition - targeted at the academic community, which aims to ensure a closer relationship between Noesis, universities and the new talents trained there. As a great place for debate and exchange of experiences, the event has brought together more than 200 participants over the last few years, who, in addition to the technological aspect, have also discussed topics such as data culture and the potential of advanced analytics in the development of other technological areas.

NOESIS LAUNCHES NEW VERSION OF NTX

Noesis has been reinforcing its focus on test automation solutions, having recently launched a new version of NTX - Ngine Testing Experience. This solution, fully developed by Noesis, simplifies the test automation process in an intuitive, fast, and versatile way, which means that you can optimize the time-to-market for the solution while reducing costs in its overall development cycle. The new version of NTX is no longer a JIRA plugin, but maintains all test management integrations (JIRA, Xray, Azure DevOps, Microfocus ALM), in addition to including new interfaces and being more user-friendly. In this version new features are also available, such as a Record & Play - which allows recording of the process and objects in a more intelligent way - and the implementation of different types of tests. By the end of the year, the first phase of artificial intelligence will be introduced in NTX that will allow detection of objects that fail most often and suggest a possible correction to the user. It should also be noted that NTX recently made a specific algorithm available to users for obtaining objects from OutSystems applications automatically.

PROFESSIONAL SERVICES AREA GROWING AT A GOOD RATE

Noesis' Professional Services business unit performed well in the first half of the year. According to Micaela Gonçalves, director of the Professional Services area, this growth is the result of the digital acceleration that organizations were forced to better adapt to for teleworking and that resulted in the creation of "business opportunities across all sectors". Up to the month of August, 45 professionals were hired, which brings the total number of consultants in this area to 185. By the end of the year, Micaela Gonçalves expects the hiring pace to remain similar to that of the first half of the year. To this end, Noesis has a stronger team that now has one member dedicated exclusively to Talent Management, "which has contributed strongly to the retention of professionals at Noesis".

NOESIS CREATES AN EAI BUSINESS UNIT

In order to provide an adequate response to the digital transformation needs of national organizations, namely the adoption of technologies, applications and distributed systems that are often not connected, Noesis went ahead with setting up a new business area - Enterprise Application Integration - EAI. The company also invested in TIBCO technology to support the activity of this new business area. To take the lead in this new area, Noesis bet on Gentil Paganella, which is now part of the Noesis team, to boost the growth strategy of this area in the coming years.

CUSTOMER EXPERIENCE
SUPPORT IMPROVEMENT

The COVID-19 pandemic changed organizations' business priorities at a world level. Thus, while **operational resilience** is the main concern, the **customer experience** occupies the second position in the priorities established by the heads of organizations worldwide.

Customers look for **4** things from brands:

Conversation
Customers need a more human conversation, in which there is a clear of information; client needs to feel understood.

Journey
Customers want and expect a multichannel journey with stages and clear results.

Satisfaction
The customer has a need that he wants to be satisfied; regardless of problems, he wants satisfaction.

Experience
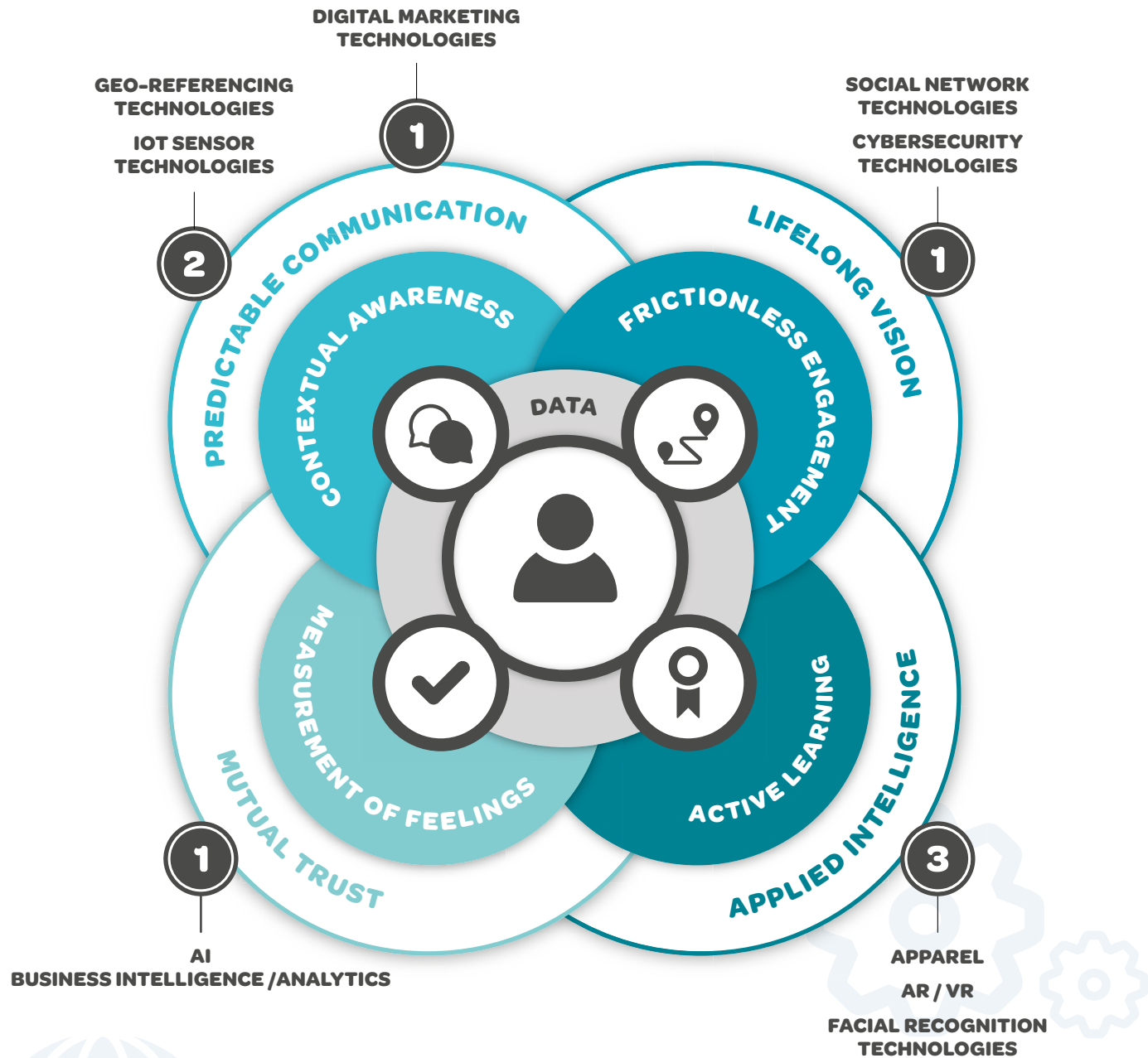Customers want brands to understand and apply context as a component of experience.

Client

Data & Technology

Data and **technology** are crucial in this process. While data is at the heart of digital experiences, by providing knowledge about the brand, the customer and the iteration, technology is the tool that enables analysis and delivery of experience.

In this context, most organizations will implement technologies to improve customer experience in **3 different stages:**

DIGITAL MARKETING TECHNOLOGIES

GEO-REFERENCING TECHNOLOGIES

IOT SENSOR TECHNOLOGIES

SOCIAL NETWORK TECHNOLOGIES

CYBERSECURITY TECHNOLOGIES

1

2

1

PREDICTABLE COMMUNICATION

CONTEXTUAL AWARENESS

FRICTIONLESS ENGAGEMENT

LIFELONG VISION

DATA

MEASUREMENT OF FEELINGS

MUTUAL TRUST

ACTIVE LEARNING

APPLIED INTELLIGENCE

1

3

AI
BUSINESS INTELLIGENCE /ANALYTICS

APPAREL
AR / VR
FACIAL RECOGNITION TECHNOLOGIES

In **2020**, more than **553** billion will be invested in technologies to improve the experience provided by organizations world-wide to their customers; and this amount is expected to exceed **714** billion in **2023**.
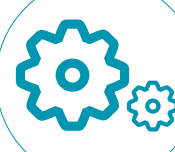
553 billion **2020**

714 billion **2023**

Nuno Cândido · Infrastructure Solutions Senior Manager at Noesis

COVID-19
TELEWORKING AND CYBERSECURITY

Currently, we live in a technological world unimaginable to our predecessors, and we are evolving daily at a frenetic pace that contributes to more and more devices connected to the IoT. However, the question that many should ask, but which is sometimes overlooked is: **How secure is this connection?**

It is undeniable that society depends on technology. Each day, there are more and more users connecting online, sharing their data with consent, but without understanding what they are sharing for certain. A study by the company Statista, published in February, shows that in January 2020, 4.5 billion people accessed the Internet, which represents 59% of the world's population.

Thus, the concern is not about most people who are connected to the internet, but about those with malicious intentions.

In March, we were all forced to adopt a remote work regime, due to the global pandemic, about which there is still so much that we do not know.

And transforming a physical space into a remote one is never easy, regardless of the level of preparation, there are always setbacks that hinder this whole process. Thus, it is essential that organizations always keep in mind that moving the office to the home of each employee can open the door to vulnerabilities in our cybersecurity.

In this sense, how can we, then, trust the devices that connect us to our network every day from numerous locations? How can we ensure that we know who is on the other side? Is it safe to share sensitive company information? The best approach that organizations can take in the face of these risks is to use the basic security triangle – **Confidentiality, Integrity and Availability**

– and look at the threats and the controls and their efficiency to have an idea of how the cyber risk has increased in this situation.

These concerns are not at all unfounded at this point. Due to COVID-19, the volume of cyber-attacks is the highest ever seen, according to data from the CTI League.

In Portugal, we are fully aware of phishing attempts, through fake emails, websites and SMS that claim to be a credible entity such as WHO or UNICEF to obtain the most sensitive data from individuals. However, this reality and this obligation to alert the population to possible attacks and situations that they may be exposed to, does not only occur in Portugal, but it happens all over the world.

However, unfortunately, companies also do not escape these attacks and, today, vulnerabilities are increased due to the situation that the country is currently experiencing. Employees are connected to unprotected networks and, for example, it is enough for someone on that network to let in malware for access to be blocked. In 2019, Portuguese companies were notified about 24 cases of ransomware, companies that operated in a protected environment. Thus, considering that attempts often occur even in a protected environment, it is natural that, in the current scenario, there is greater concern when companies have all their employees working in mostly, unprotected networks.

Given this context, it is essential that there is clear and direct communication and that the most appropriate tools are indicated to ensure that remote work is safe.

It is also necessary to inform our employees of the different ways that a cyber-attack can take, explain which channels are safe to use, what information can be shared, and how to report any suspected cyber-attack. Devices must also be formatted with tools such as encrypted VPN, various levels of authentication, malware blocking, malicious URLs, and phishing attempts, to guarantee safe navigation and connection to the corporate network.

For example, one of the strategies that companies can adopt to beat this new form of "war" against the growing number of attacks will be to automate all functions that professionals perform as much as possible, be it defence or Red/Blue Team attack; analyze the information that results from this automation process; hand over, whenever possible, this analysis to Artificial Intelligence or Machine Learning, analyzing this same information and automating new processes.

We must protect ourselves, today more than ever. It is an indisputable fact. At the beginning of this transformation to remote working, the IT team's biggest concern was to ensure that each company's systems worked 100% so that work did not stagnate, it is now urgent that they focus on the importance of cybersecurity. We can never invest too much in the protection of our data, we must inform and be informed. It only takes a click on the wrong site to let a cyber-attacker into our private network.

Constantino Fernández Pico · President of the Altia Group

CUSTOMERS WILL BE ABLE TO SEE A STRONGER COMPANY, OPERATING IN MORE COUNTRIES AND WITH A WIDER OFFER

The integration of Noesis into the Altia Group allows us to refocus strategies and attain the objective of leading the European market. Almost 2200 professionals, a strong management team and a strengthened portfolio will enable us to fulfil our newly defined goals.

Announced at the end of last year, and despite the adversities imposed by the pandemic, the incorporation of Noesis into the Altia Group has been taking shape throughout 2020. The agreement involves the acquisition by Altia of 100% of the capital of Noesis and its subsidiaries. The deal set the tone for the conversation between iNoesis and Constantino Fernández, President of Altia, who explained the basis for this acquisition, the objectives set and the work that has already been carried out in recent months. Leading in the European market is a goal in the medium term, but other goals are also on the table.

What is the importance of this acquisition of Noesis for the Altia Group?

CONSTANTINO FERNÁNDEZ:
This is about the acquisition of a company that complements us from the point of view of technological capabilities, because not all lines of activity at Noesis existed at Altia. On the other hand, in addition to the increase in technological capacity, also territorially it is an especially important operation because it is a strategic ally in the Iberian Peninsula and in the other countries where it operates. These points in addition to a significant number of clients, mean Noesis is, clearly, the best solution.

Was it a well analyzed step?
C.F.: Well, the truth is that we analyzed some companies and we believe that this is the best option. In addition, Noesis has an excellent management team, which reinforces the incorporation of talent in the Altia Group.

Are the two companies going to keep their separate identities?
C.F.: Right now, we are independent companies, and, from a commercial brand point of view, the idea is to keep it that way in the near future. We know that Noesis is a very strong brand in Portugal and we can take advantage of this value and, at the same time, reinforce the synergies that as a group we are activating in terms of internal processes, quality, recruitment, and financial and communication issues. But, in fact, we will keep both brands, their independence, and the management teams of the two companies. Naturally, we are also promoting commercial synergies, joint propositions and presenting ourselves to our customers with that offer.

Thinking about the customers

What can the customer expect of this union?
C.F.: Customers can expect more and better offers. Although we have started the key integration process, at a particularly difficult and unique moment considering this pandemic, work has not stopped, and customers can already see this.

In what way?
C.F.: We are presenting offers in areas where we were not previously operating; we have already signed the first projects in Spain and hope to ensure others, always based on new skills and in these new capabilities that we have as a group in areas like Low-Code Solutions, Data Analytics and Artificial Intelligence, Quality Management, among others. In the end, what customers will be able to see is a stronger company, operating in more countries, with more capacity and with a wider offer.

Do you see more business difficulties due to pandemic restrictions?
C.F.: We feel it in all sales matters - we know that selling complex projects and complex solutions requires contact, requires a lot of conversations and a very good understanding of the challenge that the customer has and this is not so easy right now. But we are adapting, and everything can be done; in fact, it is already being done successfully. In the case of delivery, getting the projects live and follow up, it is a little bit easier. Despite everything, work is going quite well.

Not all disadvantages then?
C.F.: Well, we can say that the pandemic brought something good: it has shown the importance of technology and this reality has been a driving force behind digital transformation. In that sense, it is making things move much faster. But, of course, each sector behaves differently, and we know that.

CONSTANTINO FERNÁNDEZ PICO

> He founded Altia in 1994 and since then he has remained in command of the company's destiny, currently assuming the position of President of the Group.

> But his professional career in this sector started a few years earlier, when in 1990 he joined Andersen Consulting as a consultant, participating and directing different development projects and technological implementation while working in computer and advanced technology auditing in Spanish public and private sector entities.

> Between 1993 and 1994 he was director of the Andersen Consulting office in Santiago de Compostela, a position which he left to set up Altia.

> Graduated in Economic Sciences from the University of Santiago de Compostela, attended the "Senior Management Program" of IESIDE.

> But Constantino Fernández is also known for his passionate speeches and the hability to share experiences and know-how with professionals across generations.

> What perhaps not everyone knows is that, as well as IT, the president of the Altia Group has another great passion: football. Constantino Fernández was, until recently, president of Deportivo da Coruña.

What are the advantages that Altia can take to the Noesis market?

C.F.: The possibility of being able to add competences, skills, diversity, partners and better serve the client in the projects we are working on.

What is your ambition?

C.F.: We want to be a major technological player in Europe. Having said that, we must not forget about what we have already achieved, as a Group, in markets such as Brazil, the USA or Chile where we have a direct presence and where we will continue to develop business.

But do you intend to start working in other countries?

C.F.: It is always an objective, but, for now, not with a direct presence; we will develop projects and work remotely. We also want to further develop the business where we already operate and where we know there is enormous potential.

Integration and joint offers dictate future work

Is there a new strategy in progress with this integration?

C.F.: In the immediate future we are focusing on the integration which will

happen this year and next year. We want to work on joint offers and take them to customers as joint projects. It is a particularly important exercise, essential, but it is not always easy because customers are sometimes used to identifying certain types of services or products and do not look for new solutions.

What are the most important sectors for the Group?

C.F.: We work in many areas: tourism, the car industry, telecommunications, public and private health, logistics, banking, education, industry, etc. Depending on where we are, we act in one way or another to adapt to the needs of that market. There are areas we work in that seem to have suffered less from the pandemic. I believe it is important not to depend on one industry or a single customer nor even one country. Diversifying gives us more stability so that we can continue to work, as a Group, without any problems.

Do you have any idea of the size of the market after this acquisition?

C.F.: In this year 2020, despite all of the precautions, we will strengthen our position and increase volume of business. This growth could have been even greater, had it not been for the

pandemic. In terms of the market, I think we are still small, but we want to be an important player in Europe. We seek profitability at the same time as seeking not to lose our core values such as customer care, being close to everyone and making sure the customer is at the heart of our strategy.

Is growth in other countries such as Portuguese speaking African countries an objective?

C.F.: For now, direct presence is not an objective. We have projects and we are submitting proposals, but we do not want to open new offices. We intend to be stronger in the places where we are already operating. If we open a new branch in the future, Brussels is a strong possibility.

How many workers will you have after this integration?

C.F.: About 2200 people.

Are you going to look for new partners or work with those that the two companies already have?

C.F.: Our list of partners is long, and we are industry leaders in all areas both in Spain and Portugal. For now, we are not looking for new partners.

What is the result of the addition of Noesis to the Altia Group?
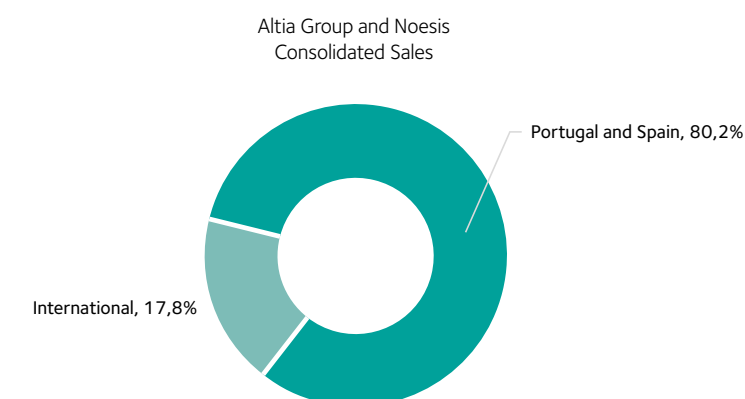
C.F.: It is not easy to answer that – I believe that together we are stronger. We have a lot more customers, a lot more capabilities, skills, and know-how; we have an excellent management team. I belive that we must be the best at what we do and that differentiates us in the market. We must also operate in more places, more countries, implement projects and understand what technology will bring in the future which is truly innovative.

Acquisition of Noesis creates a group worth more than **115.7 million euros**

The acquisition of Noesis, by the Altia Group, will create an international sized company with offices in many geographies – Latin America, North America and Europe – and which employs around **2,200** people worldwide and with a sales volume that exceeded **115.7** million euros in 2019.
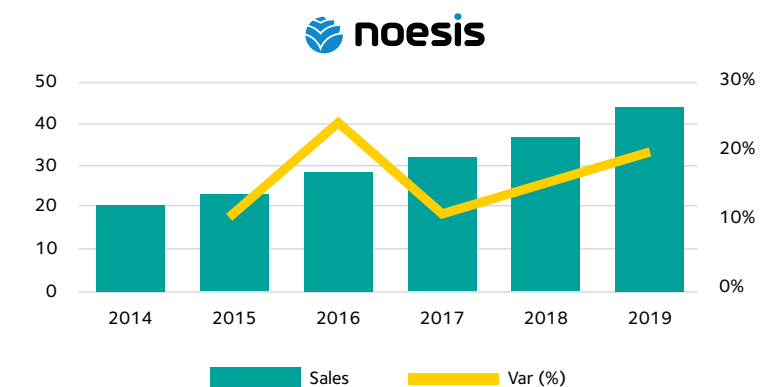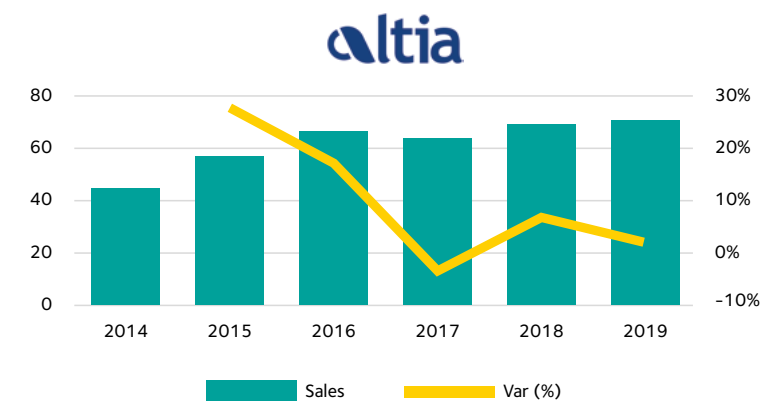
The acquisition of Noesis will further strengthen the **international presence** of the Altia Group. Keeping in mind that Noesis has a strong presence in the Netherlands, Ireland, Brazil, and the United States.

Altia Group and Noesis Consolidated Sales

Portugal and Spain, 80,2%

International, 17,8%

AI WILL BRING CHANGES
TO BUSINESS MODELS

Only **25%** of organizations worldwide have a corporate AI (Artificial Intelligence) strategy.

And the implementation of these solutions meant a change in the organizations' business models.

In fact, more than **62%** of organizations that have adopted these technologies have changed their business models.

IA

IMPROVING PRODUCTIVITY
48% +

BUSINESS AGILITY
44% +

CLIENTS SATISFACTION
42% +
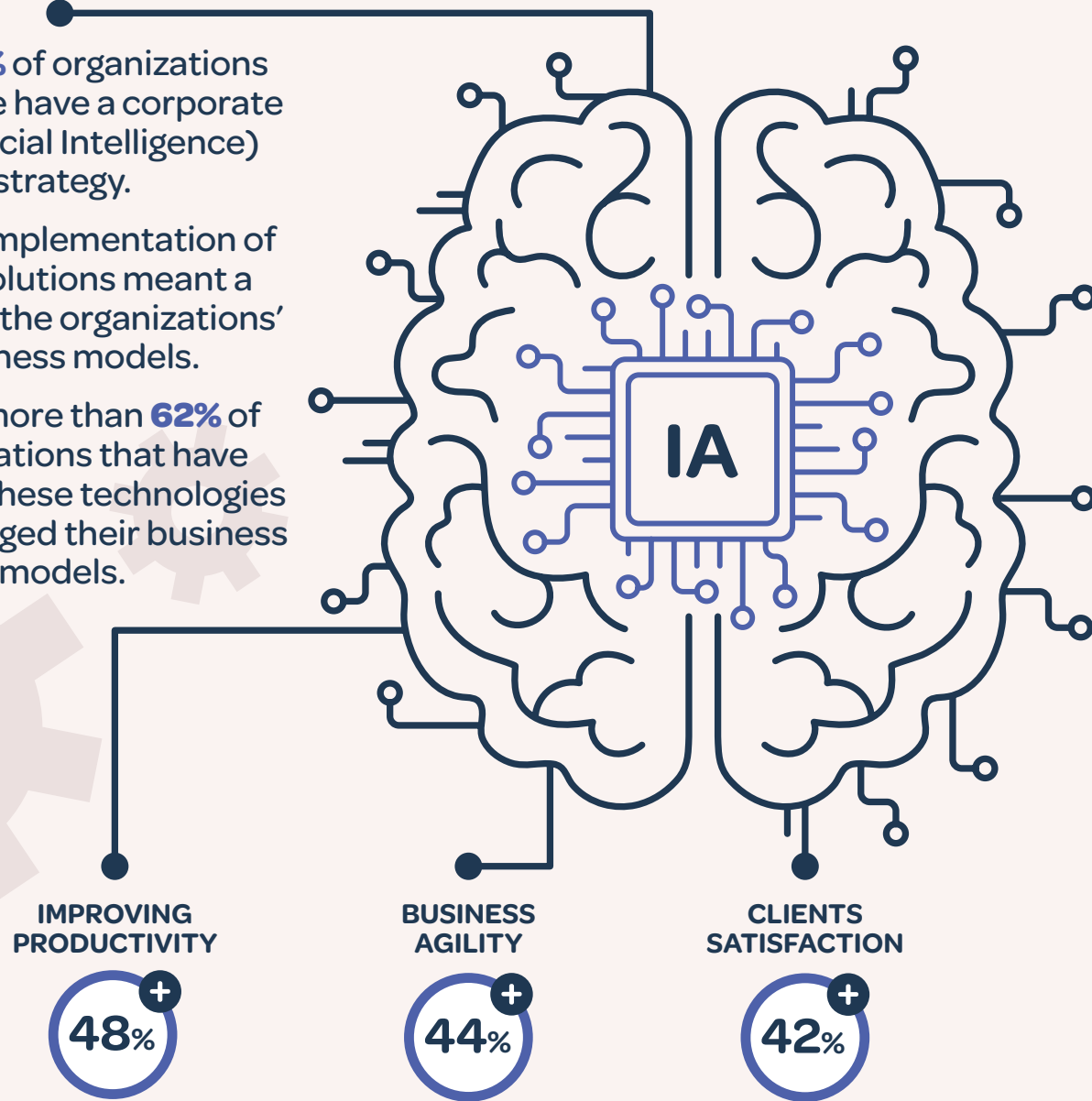
MOST SELECTED BUSINESS PROCESSES FOR **IMPLEMENTING AI SOLUTIONS.**

34%
INFORMATION TECHNOLOGIES

27%
CUSTOMER SUPPORT SERVICE

25%
RISK AND FRAUD MANAGEMENT

25%
HUMAN RESOURCES

Despite this reality, more than **50%** of organizations report that between **10%** and **30%** of AI projects fail.

TECHNOLOGY PERFORMANCE

LACK OF RESOURCES

CONFIDENCE IN DATA

COST

In this context, expenditure on **Artificial Intelligence** solutions has been growing in Western Europe. While in 2019, expenditure on these solutions was around **8.4** billion euros, in 2024, expenditure is expected to exceed **23.8** billion, which corresponds to an average annual growth of **23%**.

EXPENDITURE **2024**

23,8 BILLION

EXPENDITURE **2019**

8,4 BILLION
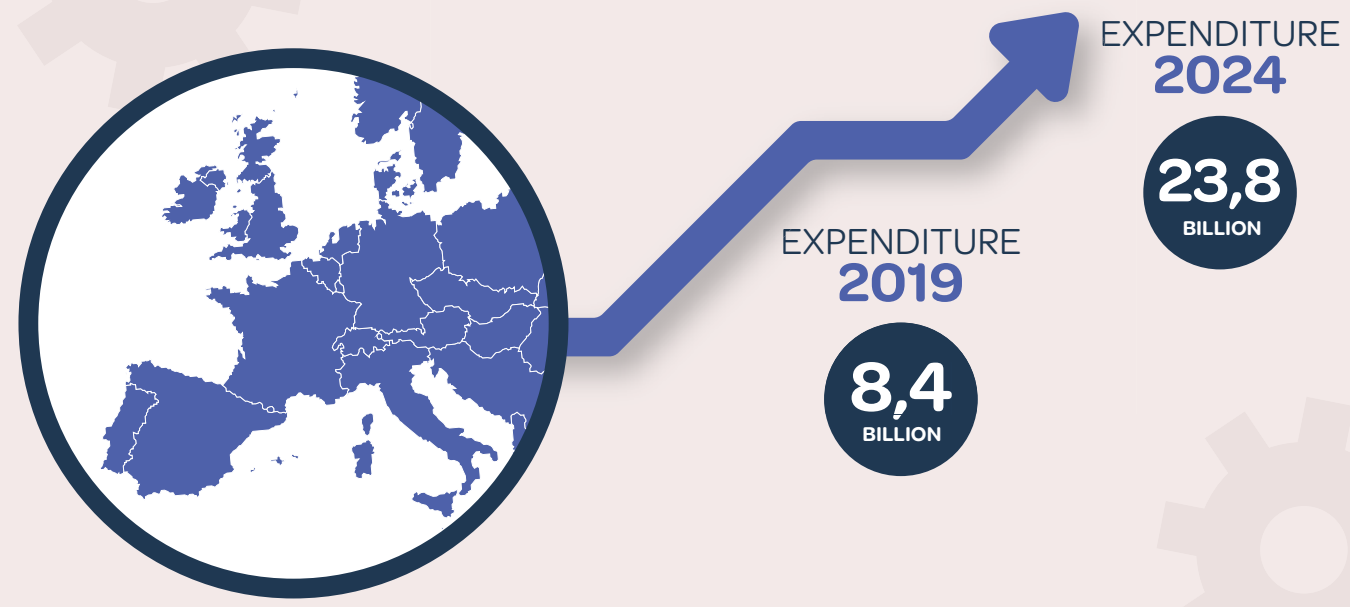
Although only **19%** of national organizations use AI solutions in their activities, this number will grow considerably in the **coming months.**

42% +
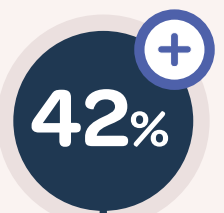
More than **42%** of organizations are in the process of **implementation** or have plans to implement in the **short term**.

DIGITAL TRANSFORMATION
AT FULL SPEED IN EDP COMERCIAL

Greater business agility, less friction between front-office and back-office operations and better customer service are some of the added benefits that Celonis technology has ensured.

José Pedro Figueiredo · Product Owner of the Process Intelligence product at EDP Comercial

Ricardo Henriques · Head of Business Enablement & Transformation area at EDP Comercial

The need to monitor and optimize business processes at EDP Comercial was the starting point that set the tone for the Celonis process mining technology implementation project, which has brought a new pace to the company.

The first steps were taken about five years ago, when EDP Comercial started looking at the market "with the objective of identifying technology that would allow effective digital acceleration" explains Ricardo Henriques, head of the Business Enablement & Transformation area at EDP Comercial. That is to say, to begin to understand how business processes are carried out daily, to monitor them relatively quickly and flexibly, and introduce an analytic dimension. In conclusion, Celonis would

allow "more transparency and more objectivity in the real implementation and operation of business processes", influencing "greatly the way we deliver the experience to our customers and even to our employees internally ", said Ricardo Henriques. José Pedro Figueiredo, Product Owner of the Process Intelligence product, which includes Celonis and Process Mining initiatives, points out that "process mining can be applied in any process as long as there is a technological trail". In the case of EDP Comercial, "the idea has always been to apply it to everything possible", this is "from the beginning of the value chain, from acquiring a customer, their entire life cycle - billing, hiring, customers that go into debt, all the services - until the occasional customer leaves ". Therefore, it is easy to see that the

volume of information that EDP Comercial has to analyze weighed heavily in the decision to proceed with the project.

Highly intuitive dashboards help users take the most appropriate measures to maintain the flow of processes; this fluidity, accompanied by a better understanding of situations, also helped the EDP Comercial team to develop important benchmarks and KPIs that guaranteed a data-based approach that could help to improve process performance.

Growth year by year

Ricardo Henriques explains that the project has changed over time and gained new features. Along this path, "in 2017 we did a proof of concept in which we had to make decisions and move forward". Subsequently, work started "in January 2018 largely in line with the more B2C-oriented processes" and also "focused on the customer's life cycle, from becoming a customer to litigation, covering the entire revenue cycle".

The head of EDP Comercial explains that, here, we are talking about "Sales, contracting, billing, collections, managing debt and litigation" as well as "the customer service component, taking into account that in commercial activity we also have digital channels, stores and the contact center, which forces you to do all this analysis through process mining". In 2019, EDP Comercial focused its work "on activities that involved other B2B information systems". This year, and considering the levels of maturity reached, "we are more focused on process mining initiatives but always paying attention to process discovery activities". In any case, 2020 "is a year in which our main objective is to develop about six concrete process mining initiatives."

Looking more closely at all the work carried out, it means understanding, for example, how the billing process worked. It is one of the processes which is "used most comprehensively and with different integrated sub-processes" says José Pedro Figueiredo. In this case, EDP takes into account "from the moment a reading arrives, whether from the customer or the distributor, its processing and the integration in the invoice that is then sent either by letter or by e-mail". He explains that "it is always important to understand if there are errors and why and for how long and act accordingly". In the case of the process analysis itself, the work aims to see "what can be improved to make it more efficient, faster and have lower costs". In this way, the two "major

aspects that EDP Comercial focuses on: process monitoring and analysis are incorporated," says José Pedro Figueiredo. Another process that gained special relevance was the one related to disconnection. "It was one of the first points that we confronted, given its importance" said José Pedro Figueiredo. Therefore, now, if a customer does not pay an invoice from EDP Comercial "and receives a set of reminders and still does not pay, a point is reached at which the service will be disconnected". The work of this team in terms of process mining arises when payment is made, even if late, "and there are a series of rules that must be followed so that nothing does wrong". Process mining "helps us to understand the different nuances of the process and to streamline the work". Tiago Gregório, responsible for the Process Mining area at Noesis, adds that "reminders are also being implemented in end-to-end processes in order to quickly identify non-conformities that, without the vision that Celonis provides, would be very difficult to identify." Measuring the return on all this investment is a more complicated task when dealing with customer satisfaction and customer service.

Towards the future

Looking forward to the coming months, Ricardo Henriques explains that "the future brings many challenges". One of the first is the possibility of "starting to integrate process mining with process automation; that is, when the technology identifies exceptions to processes, being able to have robots that will analyze the data and deal with those exceptions". Another derivative that EDP Comercial is incorporating "is the possibility of applying machine learning to process mining initiatives that will allow us to accelerate analytical capacity through the application of algorithms". Finally, cloud is also part of EDP Comercial plans, as stated by Ricardo Henriques: "We will also have to evolve towards a more cloud-oriented solution regarding infrastructure, because we currently have a completely in-house solution." Therefore, the work

developed with Noesis has a lot of growth potential. José Pedro Figueiredo explained, from the outset, there were two fundamental factors that led EDP Comercial to choose Noesis: "they were one of the first, if not the first consultants at a national level, to invest in Celonis, training and certifying professionals; the second factor is that to do this kind of work requires a very specific person profile that is not easy to find in the market and Noesis had these professionals".

PROJECT NUMBERS

4 people
the project team consists of two people from EDP Comercial and two from Noesis.

80 million cases
is the number of cases which can currently be consulted on Celonis. These include invoices, contracts and services provided to the customer.

1-year time period
for a process, but that is not watertight, some only last three months.

50 alarms
already created to work on errors and exceptions to further improve customer service.

120 users
total number of people that consulted the system in the last year.

50 to 60
daily sessions in the different areas in which monitoring is carried out.

> ❝
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> **From 2019 to 2020, we have already identified more critical errors in quality tests that ended up being mitigated, even during a phase in which we increased the software we delivered by almost 30%."**
>
> Duarte Nuno Diniz,
> *NOS Production, Support and QM Director*

Duarte Nuno Diniz · NOS Production, Support and QM Director

Quality Management
A winning strategy at NOS

Quality is one of the secrets of NOS's success. In partnership with Noesis, the company has been reinforcing its commitment in this field and providing ever-better customer service.

Quality Management has taken great strides in asserting itself as one of the most important areas within any company. This is how NOS has seen it from the beginning (after the Optimus merger and Zon). Henrique Zacarias, NOS CIO, explains that "at NOS we can clearly see how the company is assimilating the importance and evolution of the quality area in its day-to-day business" through the different measures being taken. It is a continuous project, which has counted from day one on the partnership

with Noesis, and so work and needs arose along the way as technological responses were sought. A reality that is reflected in the way that NOS teams "can start exploring software delivery very early, as Quality discovers errors before the software goes into production, providing a more stable product".

Nelson Pereira, CTO of Noesis, adds that NOS works on, "all software development, production environments, and other derivatives

internally, which forces us to provide a much more focused service". A hugely different option from other customers where "control of software development is external, and the customer only receives the piece of software already fully developed and ready to run". This is also why this partnership has been successful over the years.

Duarte Nuno Diniz, NOS Production, Support and QM Director, goes further back in time and looks at the first

moments of working together: "I would say that the first collaboration with Noesis in this field started in 1999 at the former Optimus; first with a very restricted scope and very centered on the traditional testing aspect but, over the years, we started giving a more transversal and stronger role to the Quality area internally". Currently in terms of Quality Management, "we have a large block of tests first, divided between functional and non-functional tests". The first ones that "define which products and applications we develop before they go into operation", pose great challenges. In fact, "the methodology of projects itself has changed over time and we went from the traditional waterfall to work developed in Agile mode, which required adaptation and the need to rethink the testing activity", says Duarte Nuno Diniz.

Regarding non-functional tests, it is important to mention the ability to perform "performance and security load tests on applications, especially in the more digital products that NOS provides for the customer". But at the Quality Management level, Duarte Nuno Diniz also talks about two important divisions in the company, "one that manages the entire testing environment and an area of SCCM (System Center Configuration Manager) for control and management of software resources; the latter has undergone a major transformation in order to accelerate all software development components".

Despite the different models mentioned, Nelson Pereira guarantees that "the area and the service provided by Noesis in Quality Management is adapted to all these nuances", and the software developed at NOS "has to be guaranteed by Noesis in terms of quality before it goes into production, so it is important to ensure that development will only add value and not spoil it, which will help to improve NOS services and never make them worse".

TECHNOLOGY BEHIND THE PROJECT

In a one-way logic, this project is supported by different technologies. Duarte Nuno Diniz explains that, in the automation area, "NTX is used (editor's note: Test automation tool developed by Noesis) and has an automatic testing framework from Noesis". In fact, Noesis "brought together a set of best-of-breed open source and created a framework to facilitate all test automation". For its part, in more specific areas, such as security, NOS "uses other more appropriate and focused tools, specific to this field. António Almeida, Senior Manager and Service Manager of the Noesis team at NOS states that, "all apps that are going out to the market, undergo security tests, a very important stage". But he also recalls the technology and the role of Noesis in the area of non-functional tests "whether regarding performance, volume or automation" and also of functional tests "where quality management is equally decisive, as well as the professionalism of a team that every day contributes to maintaining a high level of quality and achieving excellent results". Besides, the automation and virtualization of services "is one of the most pressing objectives that we have been pursuing", says Henrique Zacarias. The idea is not "to scrap the testing team and leave machines to do the job", but rather "direct that same team to more relevant jobs such as preparing all these tests and gaining greater flexibility in our capacity in this area". In this field, the NOS CIO guarantees that "Noesis has been a positive partner along the journey".

Duarte Nuno Diniz adds that, in this area of automatic tests, two worlds were created: "a more technical world with tests that are also more technical and that are made with more specialized elements, using NTX; and another one in which the actual business, using the applications in

Numbers to consider

> In one year, that is, throughout 2019, NOS implemented **5000 quality tests**.

> By the end of June this year, and despite COVID-19, around **4000 tests** had already been carried out.

> In terms of automatic tests, in one year, there were more than **1.2 million** implementations.

> At the level of front-end tests, which simulate what the user does, NOS did about **seven thousand** tests in 2019.

Henrique Zacarias · NOS CIO

> " At NOS we can clearly see how the company is assimilating the importance and evolution of the quality area in its day-to-day business".

Henrique Zacarias,
NOS CIO

operation, can easily automate these tests, making it easy to create and maintain automatic tests".

FROM THE NOS APP TO THE WOO BRAND

From a more business point of view, Henrique Zacarias talks about two important quality management processes. The first concerns the launch of the NOS app: having been built from scratch, there was a need among developers to deliver the product quickly to the market. "Here, the quality area had a hugely important role in promoting performance and security tests, ensuring that the app did not go to the market with errors, whether in terms of performance or security," said the CIO. For this reason, "I highlight the capacity of the Quality area to intervene and contribute decisively to what we launched". Another example given by Henrique Zacarias is even more recent and concerns the launch of the

WOO brand "which is the first 100% digital operator in the market". When launching an entirely new brand and product with very different concepts, "the QM area had an essential role in end-to-end Quality" ensuring not only, "the delivery of the app, but the entire offer in an integrated way because the app is only the visible face". This project therefore represented an important challenge as is clearly visible from metrics presented by NOS.

Duarte Nuno Diniz speaks of the "ability to test". That is to say, "the productivity of the test area in terms of the amount of software tested and, if over time, that number is increasing or decreasing". In this field, from 2019 to 2020, NOS increased "by 25% the amount of software that a professional tests monthly", so "it is increasingly efficient".

Another component to consider is the critical errors detected in a test phase: from 2019 to 2020, "we identified

more critical errors that were eventually mitigated in Quality tests at a stage when we also increased the software we delivered by almost 30% ". Duarte Nuno Diniz considers, therefore, that his area is "keeping pace with development and mitigating more and more errors". In terms of accelerating and delivering software developments, an area to highlight is the "test acceleration pipelines". In this field, this year alone, NOS has already had, "10,000 implementations of these pipelines, which, on average, guarantee savings of 200 hours per month for development teams".

NOESIS: PARTNER ON THIS JOURNEY

Having worked together for several years in the development of this project, NOS looks to Noesis "as a kind of a partner and colleague" and that "is very positive", says Henrique Zacarias. In reality, "despite

all this transformation that we have undergone, Noesis has been able to keep up because it has a huge openness and has also worked closely with us over the years," said the CIO. Henrique Zacarias points out the fact that "Noesis is the partner that is always here, but open to new challenges, to new discussions, and to be with us in fields such as automatic testing, software management or DevOps to name just a few." Duarte Nuno Diniz adds that "Noesis is able to understand NOS's needs and work differently because of it", the best example of this being "the whole test automation strategy". In terms of team management, we work together, with a person from Noesis who manages the service at NOS and "internally, in our quality area, we have two NOS people".

Regarding functional tests, the quality area "works very closely with the entire development area" every day.

Duarte Nuno Diniz also refers to a model "with a group of more junior workers that start working at NOS, but not allocated to our baseline" something that is interesting because "we also help them to mature in their work". Combining this team with nearshore resources "it is possible to prepare for service fluctuations and respond in advance to needs".

AN INNOVATIVE DNA

Innovation and the willingness to take risks are part of NOS's growth history. Henrique Zacarias believes that it is "a company ahead of its time".

The NOS CIO points out that "innovating is a tradition although it is becoming increasingly difficult to invest in disruption".

Still with innovation in its genetic code, "all areas of the company seek to innovate, one way or another; the customer service and field force, both in terms of the design of processes and requirements for systems, always have a great desire to do things differently ".

In Information Systems, "we are now exploring cognitive technologies with bots and machine learning" and that is where "the next most disruptive steps on the NOS side" will be.

Henrique Zacarias talks about the possibility of "introducing this type of technology in areas such as the front-end service, support for agents, support for the client, etc.". All part of "the NOS innovation process".

Joint growth

With a long-standing partnership, NOS and Noesis have grown together in the field of Quality Management.

When the project began, our partnership with Noesis was organized according to a resource-model idea; same is to say that Noesis had a small group of experts that were working closely with our Quality area.

As NOS evolved and reinforced the Quality area, Noesis itself also made a strong commitment in this area.

Currently, the chosen partnership model is service/capacity.

In terms of costs, this is an elastic model which NOS can adapt to its needs and increase or reduce the allocation.

This new model works both onsite and nearshore.

It Insights
IDC Opinion

Gabriel Coimbra
Group Vice President & Country Manager, IDC Portugal

FROM CRISIS TO GROWTH
WHY IS DIGITAL FUNDAMENTAL FOR THE SUCCESS OF ORGANIZATIONS?

The COVID-19 pandemic highlighted the importance of digital transformation for business decision makers worldwide, in the most varied economic sectors. But with the current economic downturn, CEOs need to make a decision, follow the same widespread cost-cutting course that all previous recessions required, or leverage investments in technology, in order to optimize costs and level the recession curve through the development of new products, services and channels, in an increasingly digital economy.

In order to optimize costs and level the recession curve, the Future Enterprise should get organized and invest in technology in order to be more competitive in increasingly digital markets.

From the perspective of IDC, the Future Enterprise can innovate and grow at a much greater rate than traditional companies. And it is totally driven by a highly qualified and customer-focused workforce, that embraces risk, at the same time, as seeking to innovate continuously. Technology and data are its lifeblood, fuelling increasingly efficient operations, new revenue streams and increased customer loyalty. The organization takes an "outside-in" approach, leveraging its stakeholder ecosystem (that is, customers, partners, workforce, and community) to dynamically evolve its offer and its business model.
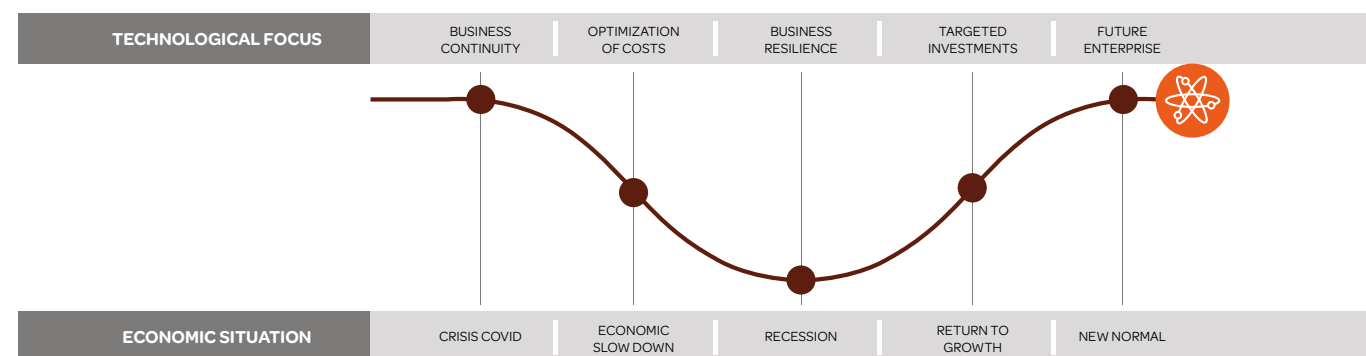

TECHNOLOGICAL FOCUS	BUSINESS CONTINUITY	OPTIMIZATION OF COSTS	BUSINESS RESILIENCE	TARGETED INVESTMENTS	FUTURE ENTERPRISE

ECONOMIC SITUATION	CRISIS COVID	ECONOMIC SLOW DOWN	RECESSION	RETURN TO GROWTH	NEW NORMAL

Figure I – The 5 phases of business recovery.

PHASE 1 COVID-19 CRISIS
Business priority: Business continuity
Whether we are dealing with the current pandemic or with an upcoming global market shock, hyper volatility will increasingly become the norm. Business continuity plans are already being rewritten and will have to become more dynamic as they are constantly tested. Organizations in this phase are desperately looking for new ideas, emerging best practices, and contributions from technology partners.

PHASE 2 ECONOMIC SLOWDOWN
Business priority: Cost optimization
In this phase, organizations are in cost optimization mode and are looking for technologies that can help them manage economic difficulties or generate financial results for the current fiscal year. Organizations seek financial assistance and/or OPEX options to manage their cash flows.

PHASE 3 RECESSION
Business Priority: Business Resilience
In this phase, organizations have moved beyond the initial COVID-19 crisis phase and have stabilized financial management. The goal now is to boost business resilience, that is, the ability to adapt to changing circumstances, while maintaining the organization's central purpose. The purpose or mission, articulated as part of the company's digital transformation, will continue to be the primary focus, even if contingency actions continue to be taken to reduce costs or seize new business opportunities related to the pandemic. Many organizations will recognize an opportunity to leverage technology investments to 'flatten the curve' or minimize the impact of the recession. These organizations will double their investments in technology to emerge from the crisis more resilient, more digitally adjusted, and ready to capture new opportunities.

PHASE 4 RETURN TO GROWTH
Business priority: Targeted investments
In this phase, economic activity begins to return to pre-crisis levels, and companies seek to invest more aggressively, but with a focus on technologies that enhance the capabilities of competing in a more digital economy.

PHASE 5 THE NEW NORMAL
Business Priority: The Future Enterprise
When organizations come out of the recession, they will be operating in a new economy, which will certainly be more digital. This will be the beginning of a new economic and social paradigm, the result of the COVID-19 pandemic, which will highlight, from the perspective of IDC, the importance of nine critical items on the agendas of executives from organizations around the world, namely:

New CEO agenda for the digital company:
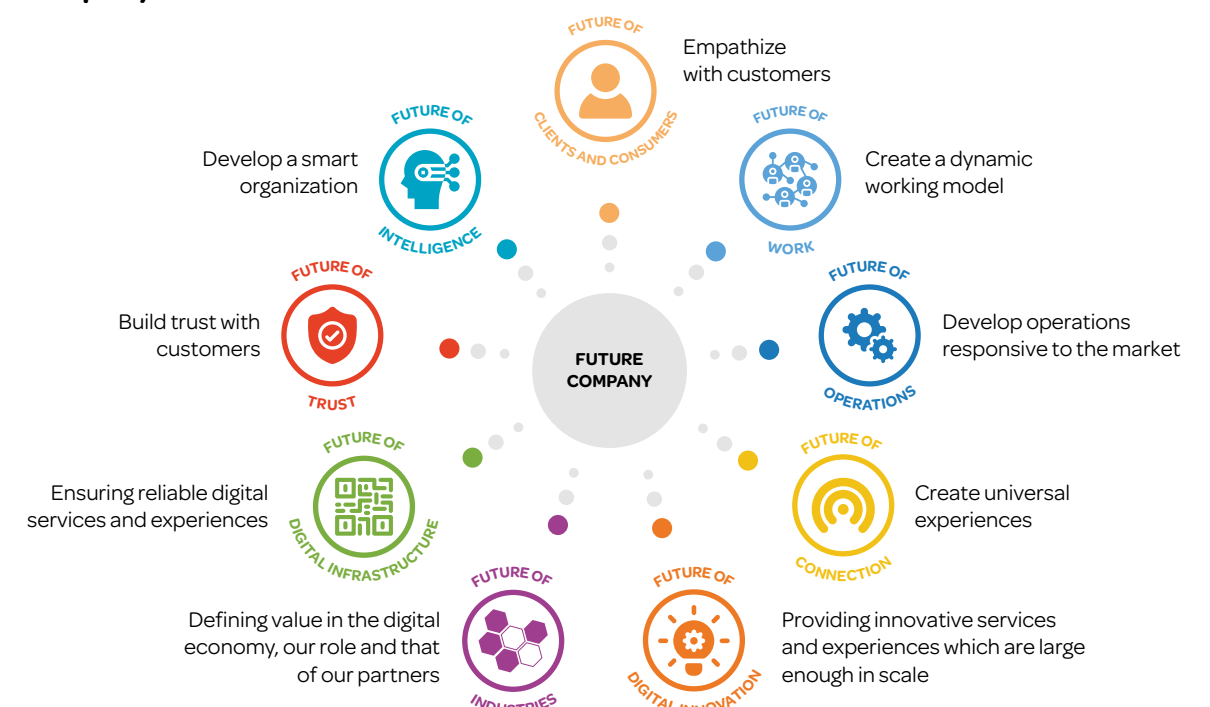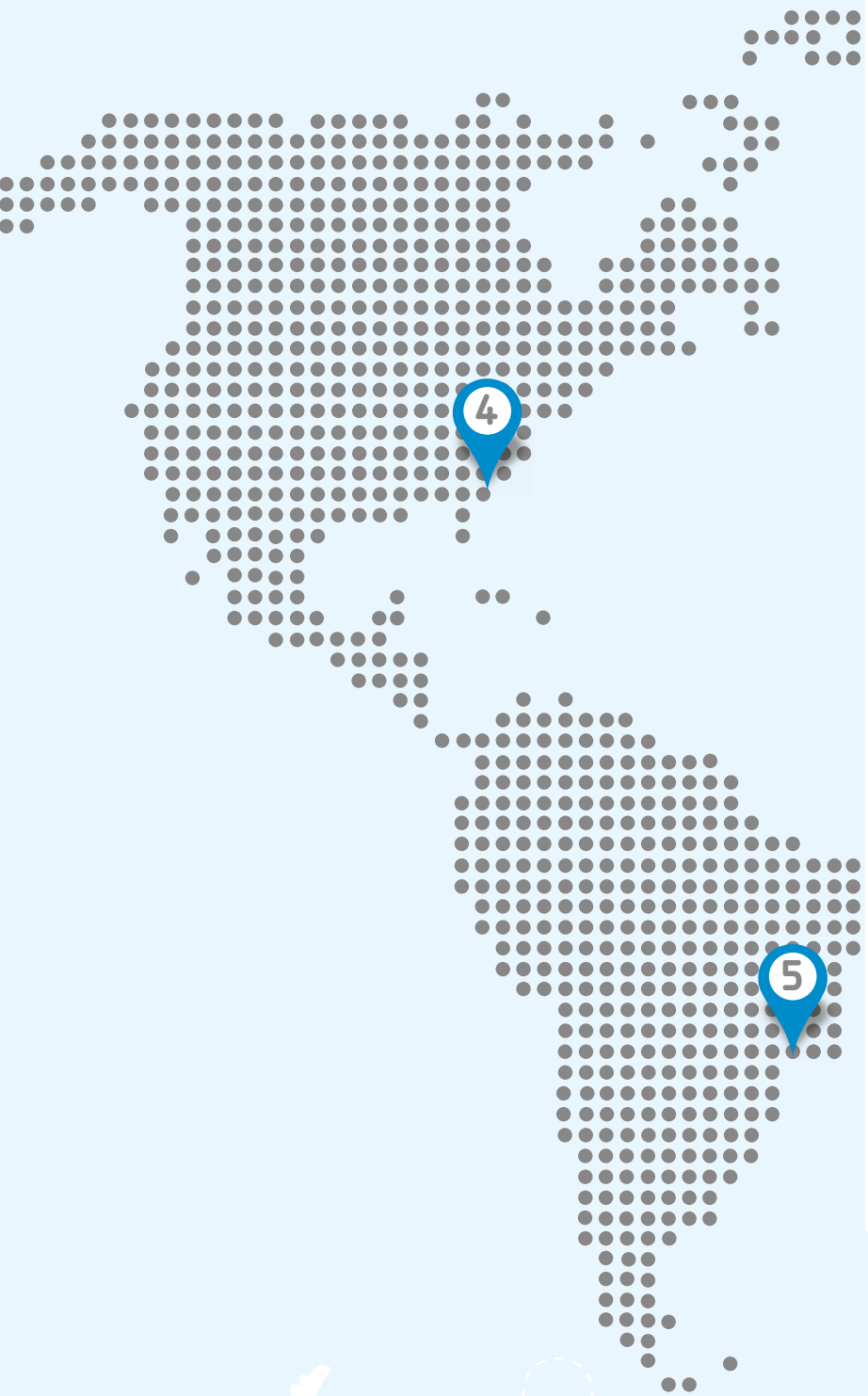
1 SPAIN

Noesis joins the Altia Group

Noesis strengthens its position in the market, by becoming part of a more robust group with 2200 employees and quoted on the stock exchange, which opens doors to a new market (Spain) and leverages Noesis's international operation in the countries where it already operates - Ireland, the Netherlands, Brazil and the USA.

2 SPAIN

Quality Management Webinar

Noesis and Altia presented the webinar "Why invest in quality?", to the Spanish market, where the theme of Quality Management was highlighted.

3 THE NETHERLANDS

Webinar OutSystems with NTX

Noesis held a webinar on test automation on the OutSystems platform, using the NTX tool.

4 USA, NORTH CAROLINA

New office in the USA

Noesis has opened an office in Raleigh (North Carolina) with the aim of accessing new sources of talent with a view to strengthening its local team. This change is also a confirmation of Noesis's commitment to this market.

5 BRAZIL, SÃO PAULO

Noesis & TIM Brasil - Together in Digital Transformation

The quality service provided by Noesis to its client TIM Brasil took another step within the Digital Transformation strategy, initiating the automation of tests for some of the main systems, supported by the NTX automation tool.

The Quality/NTX framework also includes a Digital Channel Monitoring module, simulating some customer journeys that have shown some gains, including the continuous improvement of final customer satisfaction.

DARKTRACE CLOUD RECOGNIZED FOR ITS INNOVATION

Darktrace was nominated on the Forbes Cloud 100, an annual list that recognizes the companies leading the cloud revolution while also receiving the "Best Cloud Security Service" award, at the Stratus Awards. Leveraging artificial intelligence algorithms, Darktrace Cloud allows companies to counteract the full range of cyber threats on an organization's digital media. The technology integrates with SaaS applications and environments, defending companies with hybrid cloud or entirely cloud environments.

PANDEMIC DOES NOT LOCKDOWN RECRUITMENT AT OUTSYSTEMS

OutSystems recruited more than 80 professionals during the months of isolation imposed by the new coronavirus pandemic. All recruitment and integration processes for new employees were rethought and changed, with the objective of continuing the growth of teams and the company, as well as making all newcomers feel part of the OutSystems family and integrated in the company's culture. With lockdown and remote work imposed, the main challenge was felt by the Human Resources team and the heads of the different teams, who had to redesign the processes of recruiting and integrating new members, remotely and without personal or physical contact. Therefore, the company implemented remote interview processes, through different platforms such as Zoom, as well as changing interview guidelines to help the leaders of each team find the skills they are looking for.

QLIK EXPANDS INSIGHT ADVISOR

Qlik announced improvements to Insight Advisor, its AI assistant built directly into Qlik Sense. Based on Qlik's associative engine, combined with investments in natural language processing (NLP) and cognitive technology, Insight Advisor deepens Qlik's augmented analytics with AI-driven assistance that adds value to every interaction. Qlik further improved the migration path of data to Qlik Sense SaaS with the debut of Qlik Data Transfer, built directly into Qlik Sense.

QUMULUS WORKS UNSTRUCTURED DATA

Fujitsu introduced a new solution that leverages software-defined storage technology to enable companies to control petabytes of data distributed by multiple data centers and the cloud. Qumulo's file data platform allows you to manage and access data, paving the way for the creation of new services and applications for large-scale enterprise storage solutions.

Qumulo's file system allows real-time visibility, scaling and data control "on-premises" and in the cloud, which facilitates system configuration and performance management.

MICROSOFT TEAMS RESPONDS TO NEW TRENDS IN REMOTE WORK

To help those who are working remotely, Microsoft will launch a set of new features in Microsoft Teams that aim to respond to the way people have come to interact with the different productivity tools. The news comes in the wake of the most recent edition of the Work Trend Index Report, which analyzes trends and changes in remote work and changes in the concept itself. Among the main conclusions of this Index, is the change in the relationship between video calls and job fatigue - remote work can be more challenging than face-to-face work - but also the necessary change in workplace culture. The new world of work will be hybrid, where some will choose to work in the office and learn at home, but even more so, they will choose to do it remotely. So, Microsoft is evolving its tools to meet the needs and challenges of today's work and education, but also predict trends and innovate for the future.

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FOSTER DIGITAL TRANSFORMATION IN YOUR COMPANY WITH OUTSYSTEMS TECHNOLOGY.

We offer a wide range of possibilities to develop new applications with the agility needed to help companies to adapt to a fast-changing world and to focus on their return on investment.

With our trusted expertise, we help to deliver life-value applications that can engage with customers and give companies the pace needed to transform their businesses.

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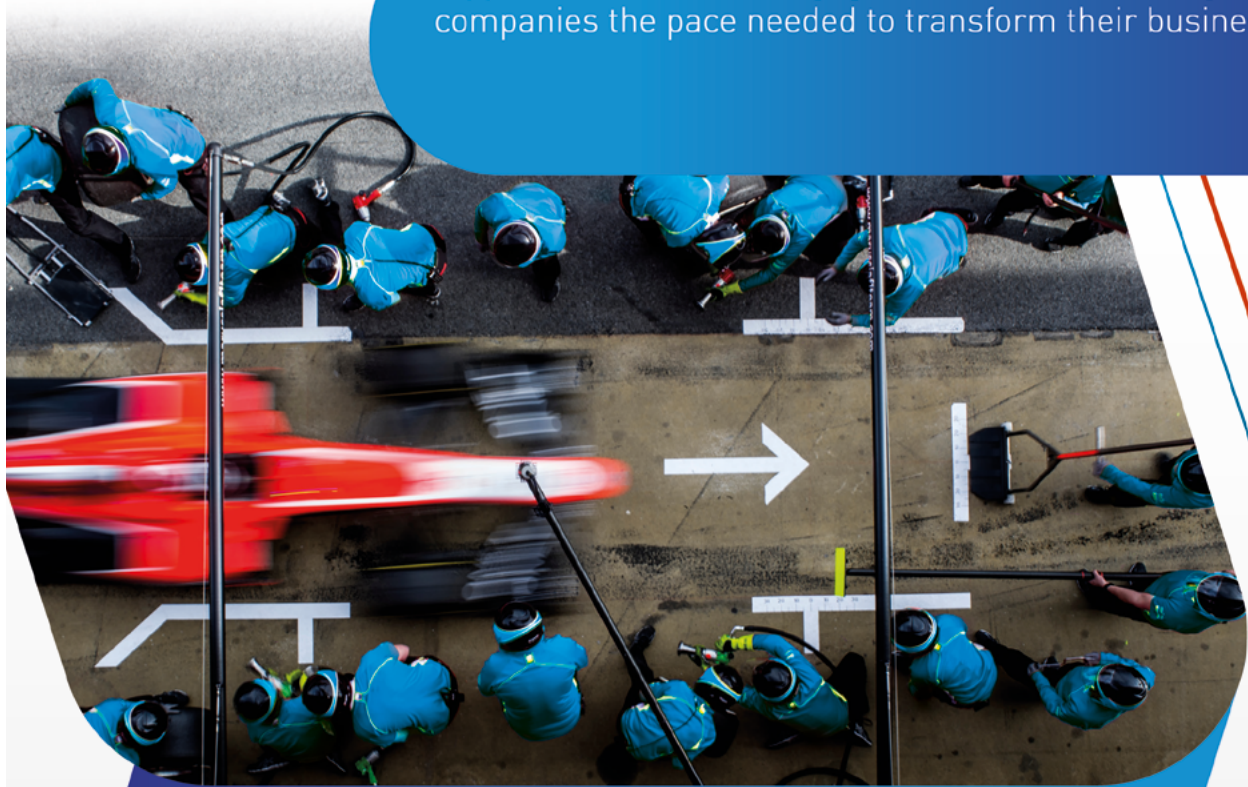
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NTX™

ngine testing experience

Decrease your testing time with NTX, a no-code test automation engine

Non-technical
Non-technical people can automate tests.

Execution
Tests created can be executed in several different environments, like DEV, TST, PPRD & PRD.

Team Collaboration
NTX can be made available to every team that needs to automate tests.

Low effort
The maintenance effort of test cases is low.

Results
Test management is integrated with test results and automatically executed.

Scheduling
Possibility to schedule test runs to be executed after working hours, saving execution history.

Create
Every team can create test cases, and these may even be specified before the software development.

Compatibility Testing
Ability to run tests on all operating systems, browsers and mobile devices.

TEST AUTOMATION MADE INTUITIVE

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Infrastructure · Software · Quality Assurance · People

Portugal · Spain · Ireland · Netherlands · Brazil · USA