SMS Engineering 2025 Highlights – R&D Activities

In 2028 SMS Engineering will turn 30 years of activity. The company was born thanks to the idea of three students of the Faculty of Engineering of the University of Naples Federico II whom, over the years, some fellow students as collaborators and a brilliant mathematic as a shareholder joined too. For more than 15 years SMS Engineering has been carrying out an excellent Research and Development activity which has led to the winning of the National Prize for Innovation by the Presidency of the Italian Republic, as well as 2 times Confindustria (the Confederation of Italian Industries) Enterprise Innovation Award and the European Business Awards Prize - Italy Country Representative. **SMS Engineering is the only Italian company awarded for innovation by two Presidents of the Italian Republic**.

Annual Turnover € 6.500.000,00
EBITDA: € 850.000,00 (13%)
Net Assets: € 2.400.000
Enterprise Value: € 9.000.000,00
Italian Operative HQ: Naples
Italian Offices: Milan Rome Florence
UK Commercial Office: London

Offering:
IT Applications and Software Development
ICT Infrastructures and Data Center Solutions
Extended ERP and Warehouse Management Solutions
Business Continuity and Cyber Security Solutions
Software Solutions for Aviation and Automotive
Datacenter Solutions for Industry and Edge Datacenter
AI Solutions

Our Mission is based on the idea that our IT solutions are a factor of growth, innovation and success. We listen to and take care of your needs, improve processes, optimize the cost and performance through our ICT solutions, which are the result of twenty years of solid experience in manufacturing, distribution, defense sector and advanced services. We produce a constant action of technology transfer by tailoring the most innovative ICT solutions available on the market on the real needs of our customers.
SMS Engineering is certified ISO 9001:2015 for: Software Engineering, development and maintenance - Information System design, development and maintenance - ICT Infrastructure design, installation and maintenance - IT Consultancy.

SMS Engineering is certified ISO / IEC 27001: 2013 for: Design, development, maintenance and assistance of business information systems: software applications, management software and ICT infrastructures. ICT Specialist Consulting SOA Rev. 02 dated 2018/04/15
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Certification by the Ministry of Economic Development for participation in NATO International Tenders. International Basic Order Agreement with NATO NCI for ICT solutions - NCIA / BOA / 13630

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CURRENT INVOLVEMENT IN RESEARCH AND INNOVATION ACTIONS

ARTIFICIAL INTELLIGENCE FOR HERITAGE Project

The management and valorization of built heritage, and in particular of archaeological sites, can make use of new, specifically configured information technologies, which, starting from the collection of documentary data and the interpretation of direct survey data of the property, allow reconstructions of conceptual 3D representations and parametric, generating digital models with automated machine learning and deep learning techniques for semantic segmentation. Starting from processes such as Scan-to-BIM it is possible to arrive at the construction of semantically evolved representations, designing and experimenting:
(1). The classification and subsequent propagation of archaeological-architectural typologies, profiled for the archaeological context of reference, through AI algorithms applied to the point cloud.
(2). The reconstruction in a Building Information Modeling (BIM) environment of the classes of elements identified through information transmission mechanisms and visual programming languages.
The development of AI algorithms could allow more automated systems for the semantic segmentation of 3D data, the latter understood as the division of the survey data into groups of typological elements (for example: wall, floor, vault, column, roof...) , identified on the basis of common geometric and colorimetric characteristics (features). This work, in the archaeological field, requires the definition of the typological elements for each specific context.
The proposed methodology applies to the case of archaeological structures that present defined architectural typologies and is based on:
o Semi-automatic techniques for identification, classification and subsequent propagation of typological elements, through AI algorithms; o A 3D reconstruction of the identified geometries, through visual programming languages implemented in BIM platforms. Digital information models of architectural heritage constitute a fundamental tool to support conservation and protection activities of architectural heritage.

ARIA – Recruiting Automation via Artificial Intelligence

The project aims to create a virtual assistant, autonomous and self-learning, which uses the paradigms of artificial intelligence (AI) to manage and automate the entire recruiting process starting from the CV screening phase, passing through the self-managed appointment and contact with the candidate with interactive video interview. All this to propose a profiling to the HR office based on the evaluation of the CV and the soft skills recognized by the algorithm (subsequently the Hard Skills will also be evaluated). Technological progress and greater calculation possibilities have made it possible in recent years to generate new opportunities in human resources and particularly in recruiting, in which all the elements linked to the logical process can be managed by a machine. The latter can offer services that are qualitatively equivalent and quantitatively superior to those of a collaborator. Furthermore, through machine learning, the machine can learn from various situations without being controlled by someone. AI will help HR solve problems related to complicated analysis tasks and time-consuming ones, allowing that department to work on more productive and value-added activities for the organization (Merlin.P & Jayam, 2018, p. 1892). So artificial intelligence is gradually replacing routine jobs and some activities present in the organization, pushing employees working in the department to acquire and develop new skills to cope with the constantly evolving technology. The objective of the application of AI in human resources and of the project subject to R&D activities is to make the execution of the various activities accurate and automated and to minimize possible errors, guaranteeing savings in terms of time and costs, and increasing the productivity of this area which is considered strategic. This type of objective can be achieved through some elements that make up AI, namely algorithms, big data and machine learning.

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Artificial intelligence is already present in assisting HR staff in some phases of recruiting, particularly in the candidate screening phase, with technologies such as chatbots, machine learning, process automation through robots, etc. ., supporting various activities and processes within the organization (screening, recruitment, etc.) (Yawalkar, 2019).

Our goal is to create an advanced system that intelligently, proactively and automatically assists HR staff in all phases of the search and selection process, including the interview phase. We therefore want to create a software prototype that is able to interact with the potential candidate in the same way as an interviewer interacts during the interview itself. The latter will mainly be based on the choice of words used by the candidate, speech and body language, thus analyzing the characteristics of the candidates who are likely to start working for the company.

SEM SECURE FEDERATED LEARNING FOR MOBILITY

Driving platooning vehicles along highways or without a pattern within a city context requires attention and skills on the part of a driver in order to prevent possible accidents, optimize the route based on traffic conditions or modify and adapt the style driving based on situation awareness.

To this end, the cars are progressively sensorized to allow the comprehensive acquisition of information on the correct functioning of the vehicle, but also on what is happening in the surrounding environment. In addition, each vehicle has network connectivity capabilities to acquire additional information from other vehicles with which it establishes a mesh, or from elements deployed along the road.

ADAS is the acronym for Advanced Driver Assistance Systems, or Advanced Driving Assistance System, and identifies the electronic systems that support the driver of a vehicle in various situations that can concern normal driving up to moments of danger or emergency.

ADAS applications face the problem of low driver confidence: gaps exist

significant differences between the collision warnings provided by ADAS and drivers' subjective perception of risk and, therefore, drivers often do not follow the suggestions. A possible explanation for this problem is that current ADAS projects mainly focus on creating uniform collision warning algorithms, while driving risk perception and driving ability among drivers are heterogeneous. To solve the above-mentioned problem, the development of customized driving assistance algorithms is a potential solution.

Based on this information, appropriate machine learning models are trained and used for critical applications such as object detection, trajectory computation, car driving preference.

PREVIOUS INVOLVEMENT IN RESEARCH AND INNOVATION ACTIONS

P.A.P.I.A Project - Advanced Platform for Production Engineering and Product Life Cycle Management based on Artificial Intelligence techniques and the use of wearable devices.
PAPIA is an innovative platform aimed at optimizing industrial production processes and the quality of the products produced, through the use of artificial intelligence (AI) techniques, sensors for machinery monitoring (RFID), computer vision techniques, use of wearable devices (smartwatches and smartglasses) and optimized warehouse management through automatic pointing devices (RFID). SMS Engineering made its contribution by making available its decades of experience in the logistics sector and used the project to create an innovative version of the current "MyWMS" software installed in various logistics and production warehouses. The result of this first research and then development work has produced the new "SMART WMS" software characterized by being "cloud-based" and therefore also usable in "Saas" mode (Software as a Service) and based on the innovative "micro-services" and "micro-frontend" patterns.

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The use of artificial intelligence has produced the "Sibylla" module for forecasting demand in the supply chain with the calculation of raw material consumption and purchase order proposals.
The module, integrated into "Smart WMS", was designed based on LSTM (Long Short-Term Memory) type neural networks and developed to be autonomous and therefore also usable as "Saas" to integrate with pre-existing software.

ASAM TECH Project - Advanced Structural Analysis Models nuove tecnologie per la misurazione e la previsione del danno strutturale di infrastrutture e edifici strategici a seguito di fenomeni endogeni ed esogeni.

ASAM TECH is a system for structural monitoring, to be applied to both the existing and the new, to continuously monitor the state of the structural system, through the collection and verification of structural information in both the static and dynamic fields.
The project aimed to improve the current reinforcement corrosion monitoring networks, adding to the real-time analysis of the signals sent by the sensors a predictive analysis of the same values based on an artificial intelligence algorithm.
After having identified, with the other project partners, the concrete structure to be monitored and having installed sensors capable of measuring the value of the current circulating in the armature, we proceeded to design and develop a connector capable of receiving and archiving these data.
Before moving on to the design phase of the machine learning algorithm, the SMS Engineering team had to make up for the lack of a history of this data and therefore used the "Data augmentation" technique to obtain a set large enough for the training phase. Once this first phase was completed, it was possible to design and develop the prediction algorithm for the data sent by the sensors installed in the monitored structure.
The final result of the work produced the web software "Smart DSS" also based on the "micro-services" and "micro-fronted" pattern, completely "cloud-based" to be used in "Saas" mode

AQUIS R&D Internal Project
In the industry, the application of quality principles, with its standards and international requirements, is voluntary and governed by the laws of competition. In the aerospace industry, however, the application of quality standards, and therefore of a system of quality management, is mandatory. Today aerospace industries have, as main objective, the improvement and optimization of process management and quality. Often the treatment of the Non Conformities, within an organizational system, is done separately and not integrated between different enterprise systems. Those companies need to adopt a software tool to effectively meet the international standards and to be compliant to the stringent requirements, in order to be accredited as first-tier suppliers of the most important international players in aviation industry (Bombardier, Boeing, Alenia etc.).
AQUIS project is a WEB application to manage the non conformity of materials, process technology and organization as well as system NC. AQUIS is a cloud based application. In more details, using cloud technologies instead of traditional client/server or on-site alternatives as our competitors, AQUIS makes reduction of costs, universal access, up to date software, potential to be greener and more economical and flexibility. AQUIS offers a hosted on-demand cloud-based NC management system solution that allow users to access the same robust, secure automated system being enjoyed by hundreds of regulated companies worldwide without having to invest in more expensive infrastructure.
AQUIS is against the pollution aviation industry, reducing scraps in production and improving flight safety.
The project proposal 718220, AQUIS was Horizon 2020 Seal of Excellence

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SOFTWARES AND INNOVATION PRODUCTS

MyWMS JIS My Warehouse Management System Sofware Application Just in Sequence

myWMs is SMS Engineering's Warehouse Management System solution that efficiently and integratedly manages the flow of goods in the company with the help of portable devices, barcodes and RF and RFID systems.

myWMs is much more than an application for warehouse logistics, it is an integrated and tailor-made solution resulting from expertise and decades of experience in the world of warehouse management for distribution and production plants.

With JIS (Just In Sequence) module, required in the automotive and industrial equipment sectors, myWMs guarantees total synchronization of material flows between internal production systems and warehouses serving production, having complete traceability to support continuous improvement to ensure that inward and outward processes are performed in the right order, with the right materials and at the right time.

Through process analysis, planning and evaluation of systems, and with the help of portable devices, bar codes and RF and RFID systems, myWMs guarantees more efficient and rational management of spaces, total control of all warehouse activities, real-time verification of goods moved, complete traceability of products and optimization of the use of resources together with a coherent distribution of workloads.

AQUIS Aeronautic QUality Improvement System

Management of product and process non-conformities. The detection of anomalies within an organizational system requires prompt management with the aim of continuous improvement. It is common for their processing to take place in a differentiated and non-integrated manner between the different company systems, with the risk of making the management of non-compliances dispersive and inefficient, as well as making data tracking and analysis impossible. SMS Engineering has developed a Non-Conformity Management System (AQUIs), which is a Web Application based on Microsoft Sharepoint 2010. AQUIs is particularly oriented towards design and manufacturing companies. It was initially conceived for the aerospace sector, where the management of non-conformities takes on greater severity, with a careful study of the international regulations that govern it. AQUIs meets the most important international quality regulations and the requirements of the main international players (Boeing, Bombardier, Alenia etc).

Home care software - mySAD WEB

A web application to manage deliveries of medical devices, orders and invoices, with two mobile apps for couriers and patients.

The Software uses Microsoft SQL Server as a relational DB and can be integrated with the most common ERP platforms. MySAD WEB covers all the phases foreseen by the home care service, from the insertion of prescriptions, by the ASL or by the operators who provide the service. The Software automatically generates delivery plans, transport documents and summary invoicing.

DB4A data Bank for Anti-counterfeiting

DB4A Data Bank For Anti-counterfeiting, Technological Solution to fight counterfeiting starting from an industrial invention by SMS Engineering for the generation of unique and unrepeatable numerical codes using low cost HW technologies not based on the Blockchain.

The counterfeiting of the products can be fought with advanced technology systems for the traceability of the manufactured products. This Project, as an idea in its embryonic state, was presented in New York to the United Nations (in ONU HQ) for a worldwide spread

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The development of AI algorithms could allow more automated systems for the semantic segmentation of 3D data, the latter understood as the division of the survey data into groups of typological elements (for example: wall, floor, vault, column, roof...) , identified on the basis of common geometric and colorimetric characteristics (features). This work, in the archaeological field, requires the definition of the typological elements for each specific context.
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Before moving on to the design phase of the machine learning algorithm, the SMS Engineering team had to make up for the lack of a history of this data and therefore used the "Data augmentation" technique to obtain a set large enough for the training phase. Once this first phase was completed, it was possible to design and develop the prediction algorithm for the data sent by the sensors installed in the monitored structure.
The final result of the work produced the web software "Smart DSS" also based on the "micro-services" and "micro-fronted" pattern, completely "cloud-based" to be used in "Saas" mode

AQUIS R&D Internal Project
In the industry, the application of quality principles, with its standards and international requirements, is voluntary and governed by the laws of competition. In the aerospace industry, however, the application of quality standards, and therefore of a system of quality management, is mandatory. Today aerospace industries have, as main objective, the improvement and optimization of process management and quality. Often the treatment of the Non Conformities, within an organizational system, is done separately and not integrated between different enterprise systems. Those companies need to adopt a software tool to effectively meet the international standards and to be compliant to the stringent requirements, in order to be accredited as first-tier suppliers of the most important international players in aviation industry (Bombardier, Boeing, Alenia etc.).
AQUIS project is a WEB application to manage the non conformity of materials, process technology and organization as well as system NC. AQUIS is a cloud based application. In more details, using cloud technologies instead of traditional client/server or on-site alternatives as our competitors, AQUIS makes reduction of costs, universal access, up to date software, potential to be greener and more economical and flexibility. AQUIS offers a hosted on-demand cloud-based NC management system solution that allow users to access the same robust, secure automated system being enjoyed by hundreds of regulated companies worldwide without having to invest in more expensive infrastructure.
AQUIS is against the pollution aviation industry, reducing scraps in production and improving flight safety.
The project proposal 718220, AQUIS was Horizon 2020 Seal of Excellence

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SOFTWARES AND INNOVATION PRODUCTS

MyWMS JIS My Warehouse Management System Sofware Application Just in Sequence

myWMs is SMS Engineering's Warehouse Management System solution that efficiently and integratedly manages the flow of goods in the company with the help of portable devices, barcodes and RF and RFID systems.

myWMs is much more than an application for warehouse logistics, it is an integrated and tailor-made solution resulting from expertise and decades of experience in the world of warehouse management for distribution and production plants.

With JIS (Just In Sequence) module, required in the automotive and industrial equipment sectors, myWMs guarantees total synchronization of material flows between internal production systems and warehouses serving production, having complete traceability to support continuous improvement to ensure that inward and outward processes are performed in the right order, with the right materials and at the right time.

Through process analysis, planning and evaluation of systems, and with the help of portable devices, bar codes and RF and RFID systems, myWMs guarantees more efficient and rational management of spaces, total control of all warehouse activities, real-time verification of goods moved, complete traceability of products and optimization of the use of resources together with a coherent distribution of workloads.

AQUIS Aeronautic QUality Improvement System

Management of product and process non-conformities. The detection of anomalies within an organizational system requires prompt management with the aim of continuous improvement. It is common for their processing to take place in a differentiated and non-integrated manner between the different company systems, with the risk of making the management of non-compliances dispersive and inefficient, as well as making data tracking and analysis impossible. SMS Engineering has developed a Non-Conformity Management System (AQUIs), which is a Web Application based on Microsoft Sharepoint 2010. AQUIs is particularly oriented towards design and manufacturing companies. It was initially conceived for the aerospace sector, where the management of non-conformities takes on greater severity, with a careful study of the international regulations that govern it. AQUIs meets the most important international quality regulations and the requirements of the main international players (Boeing, Bombardier, Alenia etc).

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DB4A data Bank for Anti-counterfeiting

DB4A Data Bank For Anti-counterfeiting, Technological Solution to fight counterfeiting starting from an industrial invention by SMS Engineering for the generation of unique and unrepeatable numerical codes using low cost HW technologies not based on the Blockchain.

The counterfeiting of the products can be fought with advanced technology systems for the traceability of the manufactured products. This Project, as an idea in its embryonic state, was presented in New York to the United Nations (in ONU HQ) for a worldwide spread

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SMS Engineering 2025 Highlights – R&D Activities

In 2028 SMS Engineering will turn 30 years of activity. The company was born thanks to the idea of three students of the Faculty of Engineering of the University of Naples Federico II whom, over the years, some fellow students as collaborators and a brilliant mathematic as a shareholder joined too. For more than 15 years SMS Engineering has been carrying out an excellent Research and Development activity which has led to the winning of the National Prize for Innovation by the Presidency of the Italian Republic, as well as 2 times Confindustria (the Confederation of Italian Industries) Enterprise Innovation Award and the European Business Awards Prize - Italy Country Representative. **SMS Engineering is the only Italian company awarded for innovation by two Presidents of the Italian Republic**.

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Offering:
IT Applications and Software Development
ICT Infrastructures and Data Center Solutions
Extended ERP and Warehouse Management Solutions
Business Continuity and Cyber Security Solutions
Software Solutions for Aviation and Automotive
Datacenter Solutions for Industry and Edge Datacenter
AI Solutions

Our Mission is based on the idea that our IT solutions are a factor of growth, innovation and success. We listen to and take care of your needs, improve processes, optimize the cost and performance through our ICT solutions, which are the result of twenty years of solid experience in manufacturing, distribution, defense sector and advanced services. We produce a constant action of technology transfer by tailoring the most innovative ICT solutions available on the market on the real needs of our customers.
SMS Engineering is certified ISO 9001:2015 for: Software Engineering, development and maintenance - Information System design, development and maintenance - ICT Infrastructure design, installation and maintenance - IT Consultancy.

SMS Engineering is certified ISO / IEC 27001: 2013 for: Design, development, maintenance and assistance of business information systems: software applications, management software and ICT infrastructures. ICT Specialist Consulting SOA Rev. 02 dated 2018/04/15
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CURRENT INVOLVEMENT IN RESEARCH AND INNOVATION ACTIONS

ARTIFICIAL INTELLIGENCE FOR HERITAGE Project

The management and valorization of built heritage, and in particular of archaeological sites, can make use of new, specifically configured information technologies, which, starting from the collection of documentary data and the interpretation of direct survey data of the property, allow reconstructions of conceptual 3D representations and parametric, generating digital models with automated machine learning and deep learning techniques for semantic segmentation. Starting from processes such as Scan-to-BIM it is possible to arrive at the construction of semantically evolved representations, designing and experimenting:
(1). The classification and subsequent propagation of archaeological-architectural typologies, profiled for the archaeological context of reference, through AI algorithms applied to the point cloud.
(2). The reconstruction in a Building Information Modeling (BIM) environment of the classes of elements identified through information transmission mechanisms and visual programming languages.
The development of AI algorithms could allow more automated systems for the semantic segmentation of 3D data, the latter understood as the division of the survey data into groups of typological elements (for example: wall, floor, vault, column, roof...) , identified on the basis of common geometric and colorimetric characteristics (features). This work, in the archaeological field, requires the definition of the typological elements for each specific context.
The proposed methodology applies to the case of archaeological structures that present defined architectural typologies and is based on:
o Semi-automatic techniques for identification, classification and subsequent propagation of typological elements, through AI algorithms; o A 3D reconstruction of the identified geometries, through visual programming languages implemented in BIM platforms. Digital information models of architectural heritage constitute a fundamental tool to support conservation and protection activities of architectural heritage.

ARIA – Recruiting Automation via Artificial Intelligence

The project aims to create a virtual assistant, autonomous and self-learning, which uses the paradigms of artificial intelligence (AI) to manage and automate the entire recruiting process starting from the CV screening phase, passing through the self-managed appointment and contact with the candidate with interactive video interview. All this to propose a profiling to the HR office based on the evaluation of the CV and the soft skills recognized by the algorithm (subsequently the Hard Skills will also be evaluated). Technological progress and greater calculation possibilities have made it possible in recent years to generate new opportunities in human resources and particularly in recruiting, in which all the elements linked to the logical process can be managed by a machine. The latter can offer services that are qualitatively equivalent and quantitatively superior to those of a collaborator. Furthermore, through machine learning, the machine can learn from various situations without being controlled by someone. AI will help HR solve problems related to complicated analysis tasks and time-consuming ones, allowing that department to work on more productive and value-added activities for the organization (Merlin.P & Jayam, 2018, p. 1892). So artificial intelligence is gradually replacing routine jobs and some activities present in the organization, pushing employees working in the department to acquire and develop new skills to cope with the constantly evolving technology. The objective of the application of AI in human resources and of the project subject to R&D activities is to make the execution of the various activities accurate and automated and to minimize possible errors, guaranteeing savings in terms of time and costs, and increasing the productivity of this area which is considered strategic. This type of objective can be achieved through some elements that make up AI, namely algorithms, big data and machine learning.

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Artificial intelligence is already present in assisting HR staff in some phases of recruiting, particularly in the candidate screening phase, with technologies such as chatbots, machine learning, process automation through robots, etc. ., supporting various activities and processes within the organization (screening, recruitment, etc.) (Yawalkar, 2019).

Our goal is to create an advanced system that intelligently, proactively and automatically assists HR staff in all phases of the search and selection process, including the interview phase. We therefore want to create a software prototype that is able to interact with the potential candidate in the same way as an interviewer interacts during the interview itself. The latter will mainly be based on the choice of words used by the candidate, speech and body language, thus analyzing the characteristics of the candidates who are likely to start working for the company.

SEM SECURE FEDERATED LEARNING FOR MOBILITY

Driving platooning vehicles along highways or without a pattern within a city context requires attention and skills on the part of a driver in order to prevent possible accidents, optimize the route based on traffic conditions or modify and adapt the style driving based on situation awareness.

To this end, the cars are progressively sensorized to allow the comprehensive acquisition of information on the correct functioning of the vehicle, but also on what is happening in the surrounding environment. In addition, each vehicle has network connectivity capabilities to acquire additional information from other vehicles with which it establishes a mesh, or from elements deployed along the road.

ADAS is the acronym for Advanced Driver Assistance Systems, or Advanced Driving Assistance System, and identifies the electronic systems that support the driver of a vehicle in various situations that can concern normal driving up to moments of danger or emergency.

ADAS applications face the problem of low driver confidence: gaps exist

significant differences between the collision warnings provided by ADAS and drivers' subjective perception of risk and, therefore, drivers often do not follow the suggestions. A possible explanation for this problem is that current ADAS projects mainly focus on creating uniform collision warning algorithms, while driving risk perception and driving ability among drivers are heterogeneous. To solve the above-mentioned problem, the development of customized driving assistance algorithms is a potential solution.

Based on this information, appropriate machine learning models are trained and used for critical applications such as object detection, trajectory computation, car driving preference.

PREVIOUS INVOLVEMENT IN RESEARCH AND INNOVATION ACTIONS

P.A.P.I.A Project - Advanced Platform for Production Engineering and Product Life Cycle Management based on Artificial Intelligence techniques and the use of wearable devices.
PAPIA is an innovative platform aimed at optimizing industrial production processes and the quality of the products produced, through the use of artificial intelligence (AI) techniques, sensors for machinery monitoring (RFID), computer vision techniques, use of wearable devices (smartwatches and smartglasses) and optimized warehouse management through automatic pointing devices (RFID). SMS Engineering made its contribution by making available its decades of experience in the logistics sector and used the project to create an innovative version of the current "MyWMS" software installed in various logistics and production warehouses. The result of this first research and then development work has produced the new "SMART WMS" software characterized by being "cloud-based" and therefore also usable in "Saas" mode (Software as a Service) and based on the innovative "micro-services" and "micro-frontend" patterns.

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The use of artificial intelligence has produced the "Sibylla" module for forecasting demand in the supply chain with the calculation of raw material consumption and purchase order proposals.
The module, integrated into "Smart WMS", was designed based on LSTM (Long Short-Term Memory) type neural networks and developed to be autonomous and therefore also usable as "Saas" to integrate with pre-existing software.

ASAM TECH Project - Advanced Structural Analysis Models nuove tecnologie per la misurazione e la previsione del danno strutturale di infrastrutture e edifici strategici a seguito di fenomeni endogeni ed esogeni.

ASAM TECH is a system for structural monitoring, to be applied to both the existing and the new, to continuously monitor the state of the structural system, through the collection and verification of structural information in both the static and dynamic fields.
The project aimed to improve the current reinforcement corrosion monitoring networks, adding to the real-time analysis of the signals sent by the sensors a predictive analysis of the same values based on an artificial intelligence algorithm.
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o Semi-automatic techniques for identification, classification and subsequent propagation of typological elements, through AI algorithms; o A 3D reconstruction of the identified geometries, through visual programming languages implemented in BIM platforms. Digital information models of architectural heritage constitute a fundamental tool to support conservation and protection activities of architectural heritage.

ARIA – Recruiting Automation via Artificial Intelligence

The project aims to create a virtual assistant, autonomous and self-learning, which uses the paradigms of artificial intelligence (AI) to manage and automate the entire recruiting process starting from the CV screening phase, passing through the self-managed appointment and contact with the candidate with interactive video interview. All this to propose a profiling to the HR office based on the evaluation of the CV and the soft skills recognized by the algorithm (subsequently the Hard Skills will also be evaluated). Technological progress and greater calculation possibilities have made it possible in recent years to generate new opportunities in human resources and particularly in recruiting, in which all the elements linked to the logical process can be managed by a machine. The latter can offer services that are qualitatively equivalent and quantitatively superior to those of a collaborator. Furthermore, through machine learning, the machine can learn from various situations without being controlled by someone. AI will help HR solve problems related to complicated analysis tasks and time-consuming ones, allowing that department to work on more productive and value-added activities for the organization (Merlin.P & Jayam, 2018, p. 1892). So artificial intelligence is gradually replacing routine jobs and some activities present in the organization, pushing employees working in the department to acquire and develop new skills to cope with the constantly evolving technology. The objective of the application of AI in human resources and of the project subject to R&D activities is to make the execution of the various activities accurate and automated and to minimize possible errors, guaranteeing savings in terms of time and costs, and increasing the productivity of this area which is considered strategic. This type of objective can be achieved through some elements that make up AI, namely algorithms, big data and machine learning.

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Artificial intelligence is already present in assisting HR staff in some phases of recruiting, particularly in the candidate screening phase, with technologies such as chatbots, machine learning, process automation through robots, etc. ., supporting various activities and processes within the organization (screening, recruitment, etc.) (Yawalkar, 2019).

Our goal is to create an advanced system that intelligently, proactively and automatically assists HR staff in all phases of the search and selection process, including the interview phase. We therefore want to create a software prototype that is able to interact with the potential candidate in the same way as an interviewer interacts during the interview itself. The latter will mainly be based on the choice of words used by the candidate, speech and body language, thus analyzing the characteristics of the candidates who are likely to start working for the company.

SEM SECURE FEDERATED LEARNING FOR MOBILITY

Driving platooning vehicles along highways or without a pattern within a city context requires attention and skills on the part of a driver in order to prevent possible accidents, optimize the route based on traffic conditions or modify and adapt the style driving based on situation awareness.

To this end, the cars are progressively sensorized to allow the comprehensive acquisition of information on the correct functioning of the vehicle, but also on what is happening in the surrounding environment. In addition, each vehicle has network connectivity capabilities to acquire additional information from other vehicles with which it establishes a mesh, or from elements deployed along the road.

ADAS is the acronym for Advanced Driver Assistance Systems, or Advanced Driving Assistance System, and identifies the electronic systems that support the driver of a vehicle in various situations that can concern normal driving up to moments of danger or emergency.

ADAS applications face the problem of low driver confidence: gaps exist

significant differences between the collision warnings provided by ADAS and drivers' subjective perception of risk and, therefore, drivers often do not follow the suggestions. A possible explanation for this problem is that current ADAS projects mainly focus on creating uniform collision warning algorithms, while driving risk perception and driving ability among drivers are heterogeneous. To solve the above-mentioned problem, the development of customized driving assistance algorithms is a potential solution.

Based on this information, appropriate machine learning models are trained and used for critical applications such as object detection, trajectory computation, car driving preference.

PREVIOUS INVOLVEMENT IN RESEARCH AND INNOVATION ACTIONS

P.A.P.I.A Project - Advanced Platform for Production Engineering and Product Life Cycle Management based on Artificial Intelligence techniques and the use of wearable devices.
PAPIA is an innovative platform aimed at optimizing industrial production processes and the quality of the products produced, through the use of artificial intelligence (AI) techniques, sensors for machinery monitoring (RFID), computer vision techniques, use of wearable devices (smartwatches and smartglasses) and optimized warehouse management through automatic pointing devices (RFID). SMS Engineering made its contribution by making available its decades of experience in the logistics sector and used the project to create an innovative version of the current "MyWMS" software installed in various logistics and production warehouses. The result of this first research and then development work has produced the new "SMART WMS" software characterized by being "cloud-based" and therefore also usable in "Saas" mode (Software as a Service) and based on the innovative "micro-services" and "micro-frontend" patterns.

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The use of artificial intelligence has produced the "Sibylla" module for forecasting demand in the supply chain with the calculation of raw material consumption and purchase order proposals.
The module, integrated into "Smart WMS", was designed based on LSTM (Long Short-Term Memory) type neural networks and developed to be autonomous and therefore also usable as "Saas" to integrate with pre-existing software.

ASAM TECH Project - Advanced Structural Analysis Models nuove tecnologie per la misurazione e la previsione del danno strutturale di infrastrutture e edifici strategici a seguito di fenomeni endogeni ed esogeni.

ASAM TECH is a system for structural monitoring, to be applied to both the existing and the new, to continuously monitor the state of the structural system, through the collection and verification of structural information in both the static and dynamic fields.
The project aimed to improve the current reinforcement corrosion monitoring networks, adding to the real-time analysis of the signals sent by the sensors a predictive analysis of the same values based on an artificial intelligence algorithm.
After having identified, with the other project partners, the concrete structure to be monitored and having installed sensors capable of measuring the value of the current circulating in the armature, we proceeded to design and develop a connector capable of receiving and archiving these data.
Before moving on to the design phase of the machine learning algorithm, the SMS Engineering team had to make up for the lack of a history of this data and therefore used the "Data augmentation" technique to obtain a set large enough for the training phase. Once this first phase was completed, it was possible to design and develop the prediction algorithm for the data sent by the sensors installed in the monitored structure.
The final result of the work produced the web software "Smart DSS" also based on the "micro-services" and "micro-fronted" pattern, completely "cloud-based" to be used in "Saas" mode

AQUIS R&D Internal Project
In the industry, the application of quality principles, with its standards and international requirements, is voluntary and governed by the laws of competition. In the aerospace industry, however, the application of quality standards, and therefore of a system of quality management, is mandatory. Today aerospace industries have, as main objective, the improvement and optimization of process management and quality. Often the treatment of the Non Conformities, within an organizational system, is done separately and not integrated between different enterprise systems. Those companies need to adopt a software tool to effectively meet the international standards and to be compliant to the stringent requirements, in order to be accredited as first-tier suppliers of the most important international players in aviation industry (Bombardier, Boeing, Alenia etc.).
AQUIS project is a WEB application to manage the non conformity of materials, process technology and organization as well as system NC. AQUIS is a cloud based application. In more details, using cloud technologies instead of traditional client/server or on-site alternatives as our competitors, AQUIS makes reduction of costs, universal access, up to date software, potential to be greener and more economical and flexibility. AQUIS offers a hosted on-demand cloud-based NC management system solution that allow users to access the same robust, secure automated system being enjoyed by hundreds of regulated companies worldwide without having to invest in more expensive infrastructure.
AQUIS is against the pollution aviation industry, reducing scraps in production and improving flight safety.
The project proposal 718220, AQUIS was Horizon 2020 Seal of Excellence

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SOFTWARES AND INNOVATION PRODUCTS

MyWMS JIS My Warehouse Management System Sofware Application Just in Sequence

myWMs is SMS Engineering's Warehouse Management System solution that efficiently and integratedly manages the flow of goods in the company with the help of portable devices, barcodes and RF and RFID systems.

myWMs is much more than an application for warehouse logistics, it is an integrated and tailor-made solution resulting from expertise and decades of experience in the world of warehouse management for distribution and production plants.

With JIS (Just In Sequence) module, required in the automotive and industrial equipment sectors, myWMs guarantees total synchronization of material flows between internal production systems and warehouses serving production, having complete traceability to support continuous improvement to ensure that inward and outward processes are performed in the right order, with the right materials and at the right time.

Through process analysis, planning and evaluation of systems, and with the help of portable devices, bar codes and RF and RFID systems, myWMs guarantees more efficient and rational management of spaces, total control of all warehouse activities, real-time verification of goods moved, complete traceability of products and optimization of the use of resources together with a coherent distribution of workloads.

AQUIS Aeronautic QUality Improvement System

Management of product and process non-conformities. The detection of anomalies within an organizational system requires prompt management with the aim of continuous improvement. It is common for their processing to take place in a differentiated and non-integrated manner between the different company systems, with the risk of making the management of non-compliances dispersive and inefficient, as well as making data tracking and analysis impossible. SMS Engineering has developed a Non-Conformity Management System (AQUIs), which is a Web Application based on Microsoft Sharepoint 2010. AQUIs is particularly oriented towards design and manufacturing companies. It was initially conceived for the aerospace sector, where the management of non-conformities takes on greater severity, with a careful study of the international regulations that govern it. AQUIs meets the most important international quality regulations and the requirements of the main international players (Boeing, Bombardier, Alenia etc).

Home care software - mySAD WEB

A web application to manage deliveries of medical devices, orders and invoices, with two mobile apps for couriers and patients.

The Software uses Microsoft SQL Server as a relational DB and can be integrated with the most common ERP platforms. MySAD WEB covers all the phases foreseen by the home care service, from the insertion of prescriptions, by the ASL or by the operators who provide the service. The Software automatically generates delivery plans, transport documents and summary invoicing.

DB4A data Bank for Anti-counterfeiting

DB4A Data Bank For Anti-counterfeiting, Technological Solution to fight counterfeiting starting from an industrial invention by SMS Engineering for the generation of unique and unrepeatable numerical codes using low cost HW technologies not based on the Blockchain.

The counterfeiting of the products can be fought with advanced technology systems for the traceability of the manufactured products. This Project, as an idea in its embryonic state, was presented in New York to the United Nations (in ONU HQ) for a worldwide spread

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SMS Engineering 2025 Highlights – R&D Activities

In 2028 SMS Engineering will turn 30 years of activity. The company was born thanks to the idea of three students of the Faculty of Engineering of the University of Naples Federico II whom, over the years, some fellow students as collaborators and a brilliant mathematic as a shareholder joined too. For more than 15 years SMS Engineering has been carrying out an excellent Research and Development activity which has led to the winning of the National Prize for Innovation by the Presidency of the Italian Republic, as well as 2 times Confindustria (the Confederation of Italian Industries) Enterprise Innovation Award and the European Business Awards Prize - Italy Country Representative. **SMS Engineering is the only Italian company awarded for innovation by two Presidents of the Italian Republic**.

Annual Turnover € 6.500.000,00
EBITDA: € 850.000,00 (13%)
Net Assets: € 2.400.000
Enterprise Value: € 9.000.000,00
Italian Operative HQ: Naples
Italian Offices: Milan Rome Florence
UK Commercial Office: London

Offering:
IT Applications and Software Development
ICT Infrastructures and Data Center Solutions
Extended ERP and Warehouse Management Solutions
Business Continuity and Cyber Security Solutions
Software Solutions for Aviation and Automotive
Datacenter Solutions for Industry and Edge Datacenter
AI Solutions

Our Mission is based on the idea that our IT solutions are a factor of growth, innovation and success. We listen to and take care of your needs, improve processes, optimize the cost and performance through our ICT solutions, which are the result of twenty years of solid experience in manufacturing, distribution, defense sector and advanced services. We produce a constant action of technology transfer by tailoring the most innovative ICT solutions available on the market on the real needs of our customers.
SMS Engineering is certified ISO 9001:2015 for: Software Engineering, development and maintenance - Information System design, development and maintenance - ICT Infrastructure design, installation and maintenance - IT Consultancy.

SMS Engineering is certified ISO / IEC 27001: 2013 for: Design, development, maintenance and assistance of business information systems: software applications, management software and ICT infrastructures. ICT Specialist Consulting SOA Rev. 02 dated 2018/04/15
SMS Engineering is certified ISO 56002 for Innovation for: Design, development, maintenance and assistance of business information systems: software applications, management software and ICT infrastructures.
Certification by the Ministry of Economic Development for participation in NATO International Tenders. International Basic Order Agreement with NATO NCI for ICT solutions - NCIA / BOA / 13630

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CURRENT INVOLVEMENT IN RESEARCH AND INNOVATION ACTIONS

ARTIFICIAL INTELLIGENCE FOR HERITAGE Project

The management and valorization of built heritage, and in particular of archaeological sites, can make use of new, specifically configured information technologies, which, starting from the collection of documentary data and the interpretation of direct survey data of the property, allow reconstructions of conceptual 3D representations and parametric, generating digital models with automated machine learning and deep learning techniques for semantic segmentation. Starting from processes such as Scan-to-BIM it is possible to arrive at the construction of semantically evolved representations, designing and experimenting:
(1). The classification and subsequent propagation of archaeological-architectural typologies, profiled for the archaeological context of reference, through AI algorithms applied to the point cloud.
(2). The reconstruction in a Building Information Modeling (BIM) environment of the classes of elements identified through information transmission mechanisms and visual programming languages.
The development of AI algorithms could allow more automated systems for the semantic segmentation of 3D data, the latter understood as the division of the survey data into groups of typological elements (for example: wall, floor, vault, column, roof...) , identified on the basis of common geometric and colorimetric characteristics (features). This work, in the archaeological field, requires the definition of the typological elements for each specific context.
The proposed methodology applies to the case of archaeological structures that present defined architectural typologies and is based on:
o Semi-automatic techniques for identification, classification and subsequent propagation of typological elements, through AI algorithms; o A 3D reconstruction of the identified geometries, through visual programming languages implemented in BIM platforms. Digital information models of architectural heritage constitute a fundamental tool to support conservation and protection activities of architectural heritage.

ARIA – Recruiting Automation via Artificial Intelligence

The project aims to create a virtual assistant, autonomous and self-learning, which uses the paradigms of artificial intelligence (AI) to manage and automate the entire recruiting process starting from the CV screening phase, passing through the self-managed appointment and contact with the candidate with interactive video interview. All this to propose a profiling to the HR office based on the evaluation of the CV and the soft skills recognized by the algorithm (subsequently the Hard Skills will also be evaluated). Technological progress and greater calculation possibilities have made it possible in recent years to generate new opportunities in human resources and particularly in recruiting, in which all the elements linked to the logical process can be managed by a machine. The latter can offer services that are qualitatively equivalent and quantitatively superior to those of a collaborator. Furthermore, through machine learning, the machine can learn from various situations without being controlled by someone. AI will help HR solve problems related to complicated analysis tasks and time-consuming ones, allowing that department to work on more productive and value-added activities for the organization (Merlin.P & Jayam, 2018, p. 1892). So artificial intelligence is gradually replacing routine jobs and some activities present in the organization, pushing employees working in the department to acquire and develop new skills to cope with the constantly evolving technology. The objective of the application of AI in human resources and of the project subject to R&D activities is to make the execution of the various activities accurate and automated and to minimize possible errors, guaranteeing savings in terms of time and costs, and increasing the productivity of this area which is considered strategic. This type of objective can be achieved through some elements that make up AI, namely algorithms, big data and machine learning.

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SOFTWARES AND INNOVATION PRODUCTS

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DB4A Data Bank For Anti-counterfeiting, Technological Solution to fight counterfeiting starting from an industrial invention by SMS Engineering for the generation of unique and unrepeatable numerical codes using low cost HW technologies not based on the Blockchain.

The counterfeiting of the products can be fought with advanced technology systems for the traceability of the manufactured products. This Project, as an idea in its embryonic state, was presented in New York to the United Nations (in ONU HQ) for a worldwide spread

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