# OUR POST-COVID VIEW ON DIGITAL INDUSTRY

An Appendix to Engineering The New Normal.



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The Digital Industry sector, from manufacturing to pharmaceuticals and the automotive industry, is at a crossroad. One thing is clear: **business "as usual" is no longer an option**. Digitalisation – defined as digital collaboration systems, in real time and accessible remotely in order to support production operations – becomes fundamental for survival. Whether we refer to it as **Industry 4.0**, the **Industrial Internet of Things (IIoT)** or **Smart Manufacturing**, the digitalisation of the industrial plant – defined as a real-time digital collaboration system, accessible remotely in order to support production operations – has slowly but inevitably been the salvation of certain companies in the sector. Similarly, the adoption of online channels for sales and customer support activities has facilitated an extraordinary business continuity and contact with customers.

However, in a sector characterised by traditional approaches and by a "we have always done it this way" mentality, for each manufacturing company that anticipated Digital Transformation, many others have fallen behind and have not been able to keep their plants operational and thus compensate for the changes imposed by the pandemic.

Indeed, the current crisis has clearly shown not only how the sudden changes in supply and demand can throw the sector into chaos, but also how **only highly flexible players in possession of the right digital tools** have been able to understand, react and survive.



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# OUR VISION OF THE MARKET

During the initial phase of the Covid-19 pandemic, some plants continued to produce the essential goods on which we all relied, such as masks to protect healthcare workers, ventilators that saved the lives of those most at risk or food to support families. People who continued to work in factories, providing continuity thanks to their strength and courage, felt it was their duty to keep production operational, trying as much as possible to respect the regulations in terms of physical distancing and personal protection. Production companies therefore had to take appropriate action, distributing disinfectants, staggering operators' shifts to reduce contacts and trying to remove anyone in a non-essential role from the plant. Amidst the significant uncertainty, one thing was immediately clear: the digitalisation of the factory becomes fundamental for the survival of the factory itself.

The phase that we are currently living through must take into account what has been learned during lockdown, taking the latter as an opportunity to review and rebuild, with a fresh perspective, new strategies, processes, products and innovative services that always put the digital realm at the very centre.

Today, the question is no longer "whether" there is a need to pursue Digital Transformation, but whether this can be done in time. To re-establish their operations in the post-lockdown world, players will be required to: improve and adapt their Supply Chain to the new scenarios, demand forecasting, simulation of production processes, remote monitoring of performance, measurement of resource effectiveness (OEE), new sales channels and remote support. AR/MR/VR (Augmented Reality, Mixed Reality and Virtual Reality) will therefore be fundamental for virtual collaboration, tools for applying and monitoring social distance behaviours to ensure worker safety and Industrial Cybersecurity. Solutions will be needed with the utmost urgency in these areas and it is precisely where we are focussing our efforts, to help our partners get back to business as quickly as possible.



#### DIGITAL THREAD

# OUR POSITIONING AND SOLUTIONS

The main areas on which we consider that all manufacturers must immediately focus their attention, in order to **restore production operations and ensure business continuity** in the post-Covid-19 world, relate to the visibility and control of the production process, to operational flexibility, to data security and the protection and security of workers. Engineering has many years of experience in this context, consisting of specific skills and expertise, as well as innovative solutions.

We operate in the following areas, where we believe next steps should be taken:

- Augmented Reality for Virtual Remote Collaboration
- Social Distancing & Contact Tracing for Workplace Safety
- Digital Twin for Manufacturing Plant & Process Simulation
- Manufacturing Intelligence for Remote Performance Monitoring
- Advanced Forecasting & Planning for Flexible Manufacturing

The first steps that can help overcome the Covid-19 crisis are specified below. These steps will in turn become the foundation for a renewal strategy that can guide us towards the New Normal.



### **First Steps in a Post Covid World**

To guide market players in the creation of their New Normal, we have identified the lines of action that must be followed, as well as our support solutions.

#### Ensuring business continuity and efficiency in the Smart Working model and protecting the health and safety of on-site staff

#### The Challenge

Protect Productivity

Implementing the rules of social distancing and evolving employee's operational processes. Once the technological platforms on which to deploy the operational activities of resources operating in the Digital Workplace have been identified, business organisations must understand which services to enable in order to transform employee management into a real Employee Experience, while at the same time ensuring performance and the health of the employee base.

- Smart Proximity, our integrated platform designed to monitor and predict the risk behaviour of staff in the workplace, providing operators who exceed safety distances with real-time warning messages: the platform can be adapted both in an office context, and in off-site structures operating in the field (power plants, refineries, etc.)
- Safe Eye: our solution based on Artificial Intelligence, which enables operators to monitor and manage social distancing between people in public places by analysing videos and images
- Digital Workplace and remote collaboration tools, both readily available on the market (Microsoft Office 365) and proprietary products developed by us (LiveBox) with secure, open source technologies, in order to enable innovative and effective working solutions, thanks to worker-oriented technologies and organisational models
- Change Management programmes to support the New Normal of the working world, through strategies and tools that help organise, stimulate and monitor the efficiency and productivity of the individual employee, and ensure that the right levels of training and assistance are available
- MarketSuite: to activate or enhance omnichannel solutions for the online sale of products and services and to strengthen the distribution logistics chain.
- SPACE1 for Augmented Collaboration: taking advantage of advanced AR, Knowledge Management and AI features, the solution provides companies with a deeply collaborative environment designed to enable them to present any product, to train staff and to solve problems quickly and securely
- SPACE1 for virtual showrooms: a solution that pushes the collaboration between Artificial Intelligence, Knowledge Base and Augmented Reality to the very maximum, creating remote sharing environments in virtual and assisted modes

- myClienteling CHAT Boutique: a web app designed to help bridge the distance gap in the shopping experience, enabling companies to take quick action and preserve their core business.
- Geocall, a solution created by the OverIT Engineering Group company, based on the AR/ MR/VR technologies and designed to apply shift administration typical of teams operating in the field, including in an office context, by optimising spaces and distances
- Management of PPE, applicable regulations, training and health surveillance, using thirdparty solutions (Kalmo by VeniceCom) and Cloud-based solutions for the management of priority HSE-related issues in Phase 2 and in subsequent phases.

#### Ancrease Resource Availability

## Digitalize processes through outsourcing and adopt intelligent systems to improve and automate core processess

#### The Challenge

Digital Transformation has now become inevitable around the world for the traditional manufacturing industry and will encourage the adoption of new technological solutions every day. But digitalising processes means creating internal collaborations capable of involving the entire Supply Chain, to obtain real-time information on the products being produced.

- **Cloud:** As the founding technology of Digital Transformation, it enables the digital ecosystem where this transformation can take place
- Al & Advanced Analytics: the tools that enable companies to make the most out of the information content of data masses, through the adoption of automatic and systematic techniques
- **RPA:** a set of technologies focussed on the automation of repetitive, large-scale and errorprone work processes, through the application of "intelligent" workflows
- RPA and BPO: increase the efficiency of processes by ensuring the maintenance of knowhow and reducing the need for internal resources for repetitive or low value-added activities
- Process Mining: for an in-depth analysis of business processes and their everyday occurrence
- Full Outsourcing and Application Outsourcing: for the maximum rationalisation of costs, making it possible to free up human and economic resources to implement the Digital Transformation.



# Adopt Digital Twin and Process Mining to make better informed, quicker and more vision-oriented decisions

#### **The Challenge**

It is fundamental for today's manufacturing market to create a digital copy of activities carried out, modelling the activities and carrying out simulations before applying decisions in the real world, thus reducing risks and improving both the speed and the quality of decision-making processes.

#### Our offer

- Digital Twin: to create an interconnection between the physical and virtual worlds and enable the constant monitoring of both systems. The solution helps prevent critical issues, develop new opportunities and investigate the future through simulations. The Digital Twin therefore offers a reliable and risk-free environment for researching and evaluating optimal operating scenarios.
- Process Mining: the process of carrying out a detailed analysis of business processes as they take place in everyday life, with the aim of mapping them, finding their strengths and weaknesses and any deviations from the standard processes codified by policy, and then improving them



Protect and guarantee the inviolability of systems, data security, legislative compliance and prevent fraud attempts

#### **The Challenge**

Today, more than ever, the exponential growth in the quantity and value of data is directly proportional to the importance of adopting cyber technologies, methodologies, skills and IT security practices designed to help protect corporate assets and the data itself from the risk of attacks.

#### **Our offer**

**Cybersecurity**, IT security services for applications, systems and services managed through platforms and technologies that enable the timely detection of cyber threats and make it possible to take effective action. Our service portfolio is made up of the constant interaction and evolution of these technological and human components, which work closely together to ensure the security of the IT services ecosystem.







Expand the existing sales channels to meet the growing online demand and the distribution chain

#### The Challenge

When the pandemic is finally over, things will no longer be as they were before: it will be necessary to imagine new ways of making purchases that can support our new lifestyle habits. We will have to get used to the idea that people will change the way they organise their expenditure and will probably continue to avoid close contact with others as much as possible.

- Cost Category Management: satisfy customer needs and go beyond the boundaries of product categories, combining sales channels and collaboration models between partners.
- MarketSuite: the e-commerce solution offered by Digitelematica, an Engineering group company
- Customer Experience Management: to stay in touch with customers, streamline processes and help improve profitability, ensuring that every consumer interaction phase is smooth and efficient, to enable an overall increase in profits



#### Digitally Present

Improve sales processes with the Digital Showroom solution, to create new meeting points between brands and customers

#### The Challenge

Enriching interpersonal experiences and interactions at a distance, integrating physical space with digital technologies, through immersive experiences and perfectly simulated environments. AR, VR and MR come to the rescue of the Digital Industry wherever it is necessary to take action on complex plants and machinery and in conditions that are not easily reproducible in real life or which would necessitate high costs

- SPACE1: for developing new experiences and AR/MR/VR applications, attempting to respond in full to the needs of manufacturing companies. In particular, we support the maintenance, support services, virtual collaboration and knowledge sharing needs of production plants
- Virtual showroom: to bring the showroom to the customer's or the consumer's home, for real-life experiences and emotions.



#### Explore and Evolve

Implement Digital Trasnformation to get the most out of production, sales process and customer service interaction

#### The Challenge

The industrial sector is experiencing a profound transformation in which the convergence between systems, data and processes used throughout the life cycle of the product is fundamental: from design in the company's offices, to production in its factories, from the Supply Chain in its warehouses to the use of the finished product by the customer.

#### Our offer

Interconnection technologies are the anchors needed for every successful manufacturing company. We, at Engineering, support companies by designing and implementing Digital Transformation paths, combining our knowledge of business needs, with the best technologies available on the market:

- Process Maturity Matrix: to evaluate and measure with objective criteria the degree of maturity of business processes with respect to the Digital Transformation and identify the roadmap to achieve maximum process efficiency and the best quick wins.
- Digital Maturity Assessment: the path that helps give better knowledge of one's company, in its complexity and in its level of development. Thanks to this process, the company can identify its strengths and weaknesses. This, in turn, enables businesses to set goals and define an evolutionary roadmap that can achieve the set goals in the correct timeframes and with the involvement of all stakeholders.
- Digital Enabler: our ecosystem platform that enables companies to harmonise, synchronise, integrate, visualise, combine, associate and analyse data from different sources. All the information is converged into a single point of knowledge, through which it is possible to develop new value-added services and to digitally enable more mature technologies and applications to implement the Digital Transformation.



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There's no doubt the world has changed. New values, new rhythms, new models. Everyone is wondering how to rebuild and what direction to take. It is a time when the answer has to be found by asking the right questions. Questioning the status quo. The rules of the game have changed and perhaps the game itself will change. How to combine the definition of core values to generate ideas, how to learn from other markets, or how to capitalise quickly on technological developments.

New Normal will speed up the use of data to create value: these recent months have shown the power of data transversality and how, around them, we can create quickly services and virtuous ecosystems. **The walls between one vertical and the other will increasingly be mental barriers**, we must then give life to new partnerships, designing and creating digital ecosystems based on technologies transversal and enabled by vertical services. These are the most important challenges to face. And we at Engineering have the strategic vision and operational capacity to accompany our customers in this challenging journey. Every day, we experiment and measure the potential for change of the new enabling technologies coming out on the innovation scene. But we also know how to do this gradually and strategically, in order **to ensure the harmonious and sustainable evolution** of the complex system of skills, processes, infrastructures and services of the organisational context in which we operate.

It is with this strategic ecosystem-based approach that today, we can partner with our stakeholders to build a New Normal that follows the paradigms of Digital Transformation: a path that starts with the restoration of specific business values and continues up to the recognition and involvement of the various networks of relationships and transactions that define the internal organisational system and that relate to it externally. Directly (customers, suppliers, partners, etc.) and indirectly (physical, social, economic, environmental, technological, cultural/educational system, etc.).

An intervention – the one we have adopted – that invests in innovation and not in technology: because first and foremost it focusses on the ability of the organisational body to react to the crisis, to face and resolve all the pre-existing rigidities on the supply and demand side, to then proceed to build, based on unexpressed potential and on the new value proposition, its very own specific and solid construction of the new New Normal business model.





Our toolbox consists of:

- A Co-design Framework, for the generation of ideas focussed on the innovation and transformation of the business model and for the joint design of prototypes of "ecosystem"based solutions and platforms;
- Change Management and Maturity Assessment processes, to assess the strengths and areas for improvement of the organisational system and its positioning with respect to the business context in which it operates;
- **A Multi-Industrial Experience**, for sharing the experience, skills, processes and solutions that our Group has matured in the specific business chains and which become transversal when they intersect and can enhance or condition the customer's new innovation model;
- An Ecosystem View, designed to offer integrated and coherent services models that enable "user-centred" views (e.g. Digital Citizenship, Mobility).

There is no perfect solution for overcoming this crisis and building the so-called New Normal. But there is that sought-after ability to imagine, to create and to develop the open "peer production" solution based on a collaborative, synergistic and iterative approach: always able to give the best answers to the new innovation questions.

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# ENGINEERING

Engineering is one of the main players in the field of Digital Transformation of public and private companies and organizations, offering an innovative offer targeted at the main market segments. Together with its subsidiaries, the Engineering Group is committed to pushing the envelope as regards the application of emerging technologies. It also works in the area of system implementation and integration and on redefining processes in order to promote innovation for the benefit of businesses and Public Administrations.

> With around 12,000 professionals in 65 locations spread across Italy, Belgium, Germany, Norway, Republic of Serbia, Spain, Sweden, Switzerland, Argentina, Brazil and the USA, Engineering manages projects in over 20 countries, supporting customers in the business areas where digitalization is having the biggest impact. Its products and services cover all strategic sectors, including Digital Finance, Smart Government & E-Health, Augmented Cities, Digital Industry, Smart Energy & Utilities, Digital Media & Communication. The group aims to help change the way in which the world lives and works, by combining technological infrastructures organized in a single hybrid multicloud, the capability to interpret new business models and specialist competences in all next-generation technologies: AI & Advanced Analytics, Cybersecurity, RPA, Digital Twin, IoT, Blockchain. With significant investments in R&D, Engineering plays a leading role in research, by coordinating national and international projects thanks to its team of 450 researchers and data scientists and a network of academic partners and universities throughout Europe. One of the group's key strategic assets is its carefully considered staff training policy. Engineering, since 1999, has had its own dedicated multidisciplinary training academy, the "Enrico Della Valle" School of IT & Management. With 300 certified trainers and hundreds of courses, the School has delivered more than 19,000 days of technical, methodological and process training during the last year.

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