NEWSLETTER

eLSA

A NEW VISION FOR SUPPORT ENGINEERING

EDITO

While 2020 was shaping up to be a year dedicated to accelerating the development of our eLSA tool, the world is undergoing an unprecedented health and economic crisis.

Because **agility is part of the LGM Group's DNA**:

We immediately guaranteed the security and health of our employees and reassured our customers of our ability to ensure business continuity by guaranteeing the security of our information systems and the availability of our teams.

Because **1300 brains are better than one**!

LGM group has launched its 2020 reboost plan for which all employees have been invited to rethink the ways we are operating and to adapt it to the "next world" and contribute to the construction of an even more united company,

And finally, because **our thirst for technical innovation** never tarnishes, LGM group continues to invest its energy to develop ever more innovative solutions.

Good reading,
The eLSA team.

REBOOST 2020

Contents

elsa.lgm.fr/en

LGM, NOTIFIED BY SIMU (FRENCH JOINT MUNITIONS SERVICE)

In the end of december 2019, LGM has been notified that our two softwares had been selected by the joint Munitions Services (SIMu).

For the record, SIMu is the body in charge of managing the entire ammunition stock (ranging from simple cartridges to missiles and torpedoes) used by the different Armies for various sites and operational contexts. This represents approximately 5,000 users.

The SIMu had launched a bid solicitation in mid-2019 for a new complete LIS (Logistics Information System) integrating maintenance repository and CMMS management functionalities. In partnership with Capgemini , which will develop additional LIS modules and manage the global integration, LGM is honored to provide its softwares, eLSA and CindY.

Capgemini has been selected after the solicitation period and has decided to rely on LGM to realize the module focused on Maintenance and control. It is the perfect opportunity for us the showcase our two abovementioned solutions !

The objective ? To propose a module to ensuring the continuity of the data of the trees applicable to the applied trees. Luckily, eLSA and CindY have been designed around the ASD standards S3000L and S5000F to facilitate such exchanges and guarantee digital data continuity throughout the whole product life cycle. The challenge for LGM is now to propose a solution tailored for SIMu's needs through specific and specialized development, while keeping the logic and mechanics of our two COTS.

This ambitious project will last 4 years and has already started in February 2020. By the end of February, LGM received a delegation of about fifteen Capgemini and SIMu staff members who were shown a functional demonstratsion of our two COTS, eLSA and Cindy. The ensuing discussions allowed us to identify yet more precisely SIMu needs while challenging LGM's experience in maintenance, as well as the capacities of the two softwares. New technical discussions are planned in the upcoming months, in order to design the most adapted and efficient solution for the SIMu.

This project is the perfect opportunity for eLSA to evolve in an integrated environment. It will only be integrated with CindY at first but it will be joined later by additional solutions from other software designers. eLSA has been conceived as an embeddable solution and this project is an occasion to test and push our software's capability in this regard.

ELSA, IN THE DIFFERENT PHASE OF A PROJECT'S LIFE : SPECIFICATION
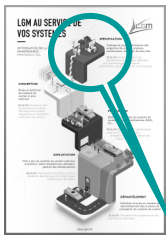
In our previous edition, we presented you with this graphic that helped you discover the contribution of eLSA at each stage of a system's life.

We will now focus on the first phase of a product's life, detailing the use of eLSA at this time

SPECIFICATION

Project management, support requirement allocation, preliminary analysis, LSA plan editing

➕ **eLSA** Tailoring of data dictionary definition of breakdown and preliminary analysis, contract follow-up

One of the key to success in LSA studies ? Anticipation

LSA studies are based on two aspects : Process and data

In order to lead an in-depth study and ensure that support problematics are taken into account in the earliest stage of the process possible, we must ask ourselves the right questions as early as possible.

Our first step would be to ask ourselves « Why ? ». What is the purpose of my LSA study ? Is it to maximise the availability of my systems, to manage and lower my costs, to reduce the maintenance man power ? Answering this question will allow to adapt the process to suit to the context and the needs of each users. It will define for example what kind of breakdown will be used : functionnal for the analyses, physical for provisionning, zonale for the maintenance definition... It will also define how one can define the candidate selection process : from their importance when it comes to staff security ? By their impact of availability ? by taking in account the ressources needed to support them? Most importantly, i twill help determine which analyses should I perform to optimize my support system. FMECA, maintenability ? ergonomy ?

Once these questions have been answered, all process-related decisions are recorded in the LSA plan, while data go to guidance documents.

eLSA, being designed to support the entire LSA process, is entirely customizable. it is possible to customize the data dictionary, and to limit the list of choices to the values that are defined there. It is also entirely possible to link the ASL plan to the database to keep track of all decisions made which helps guarantee the adhesion to one defined process throughout the entire project

This is the first step in the process of defining a support system : mastering it makes it possible to guarantee that the whole study starts in the best way possible... "

ELSA ONE TOOL FOR SEVERAL PURPOSES

As presented in the February 2020 Newsletter, eLSA's functionalities cover the entire system lifecycle, from the specification phase through the production and operation to dismantling.

Furthermore, beyond a simple « temporal » coverage, eLSA can be used throughout the entire value chain : from the OEM to the system integrator to the operator.

Once we take this factor into account, several alternative usage of eLSA are possible depending on the stakeholders and their respective needs.

- **A tool for producing** support data for an OEM,

- **A data integration tool** for a system integrator,

- **A tool for editing, visualizing and validating** supporting data for a presciber/ operator

Catering to these different customers' needs was paramount in eLSA's development. These requirements are multiple and complementary and could be summarised as follows :

OEMs and other various « data producers » expect productivity support features : mass import/updates, copy/paste functions and traceability of modifications,

System integrators require data consolidation functions : partial imports by systems or sub-systems (usually by suppliers) « baselines » monitoring and management, calculation of consolidated KPIs,

End users/ operators will be particularly attentive to daily odata procesing : simple and ergonomic user interface, possibilty to edit reports.

To illustrate the versatility of our tool, we offer a **series of functional tips** depending on the **type of user** (next page).

SYSTEM INTEGRATOR ; INTEGRATION OF THE EQUIPMENT TREE STRUCTURE.

Tip : When a tree nod is generated, it can be used at different points in the structure. As such, updating an element attribute in one tree structure will also update it in the structures using said element.
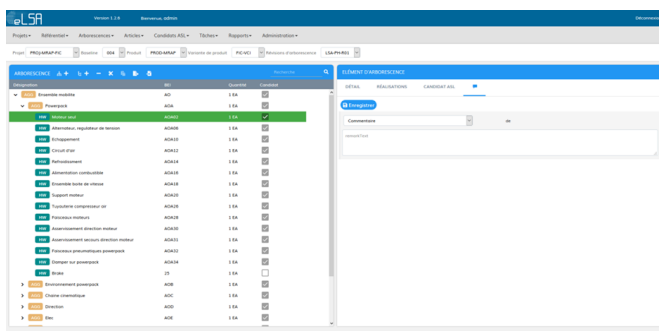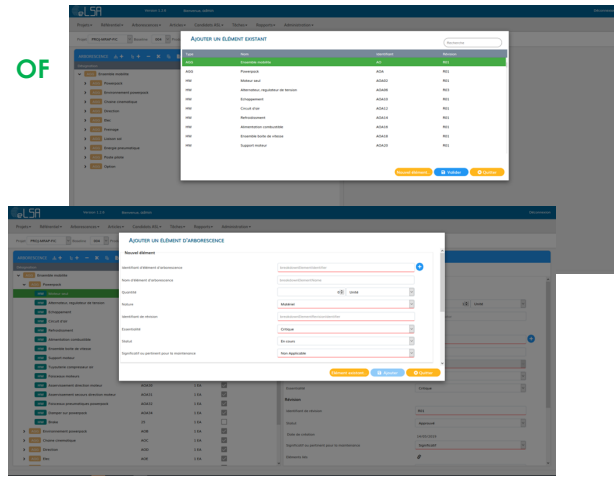
OPERATOR : EXPLOIT MAINTENANCE DATA.

Tip : You can comment on the BASL elements provided to you through the comment option (bubble icon). The system or the equipment manufacturer will be able to reply to you there.

OEM/SYSTEM INTEGRATOR : VIEW OPERATOR COMMENTS.

Tip : You can consolidate all operator comments on an automatically generated report. Each comment is linked with the item to which it is related.

To use a common tool throughout the whole value chain guarantees the continuity of all shared data between the stakeholders. It allows them to share one overview and to interact easily between each other.

Furthermore, it is also guarantees the compatibility of the informations shared between these multiple organisations : records show that data standardisation isn't always sufficient.

This is yet one more reason to choose eLSA to implement S3000L on your new programs!

EUROSATORY 2020, IT IS BUT A DELAY !

As every two years, the LGM group intended to present their offers in the International Defense Exhibition: EUROSATORY 2020 in Villepinte.

Obviously, the current pandemic forced our hosts to report this event to 2022

This business fair was the occasion for the Group to present, among other things, the latest features of eLSA. It might have been cancelled, but we still wanted to share with you the latest innovations and demonstrations throughout this article.

Let's set out for this « virtual » tour !

Training Offer Section

Digital Maintenance Section

Designing Digital Support Section

Embedded Electronics Section

Industrial Performance Section
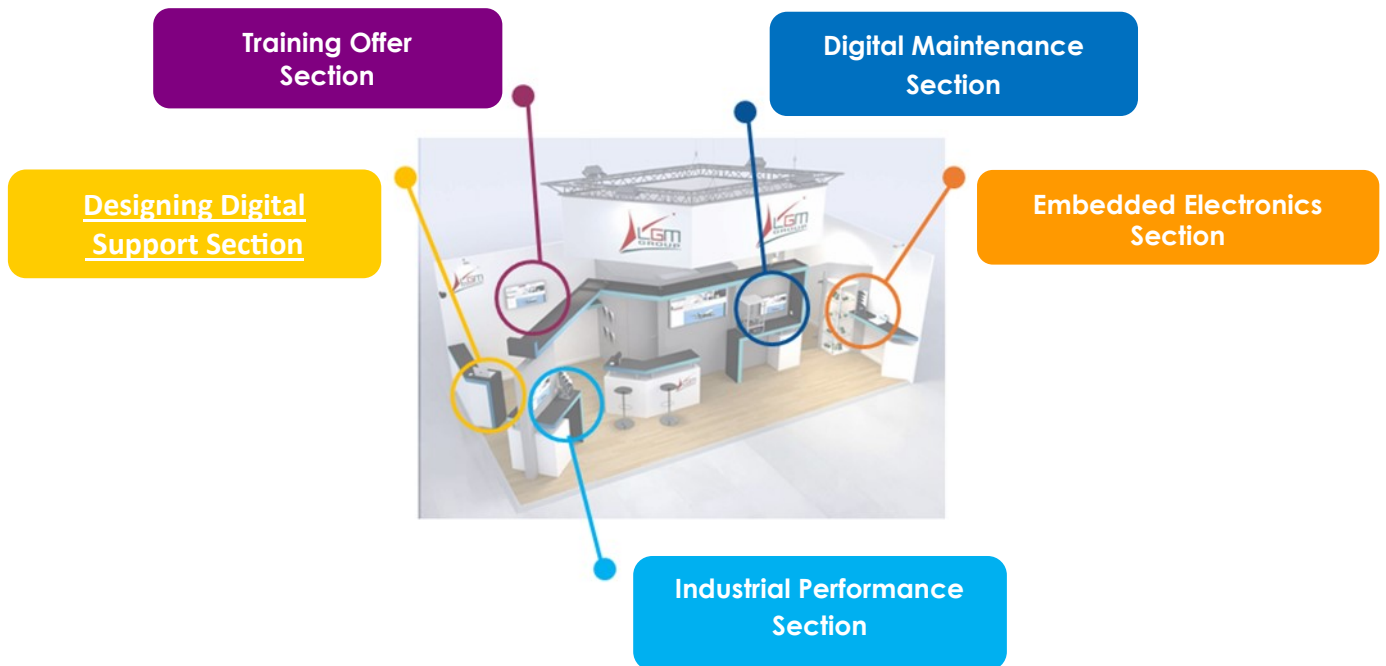
Our offers have aroused your curiosity and you want to know more?

We are of course at your disposal to present our innovations in more details through videoconferences, webinars and personalized demonstrations in our showroom.

Do not hesitate to contact us!

● HOW TO ENSURE DIGITAL CONTINUITY IN SUPPORT ENGINEERING?

Designing Digital Support

Based on its expertise regarding ASD specifications, LGM has developed several adapted and interconnected design tools to specify the support system for complex systems.

- ELSA, Logistics Support Analysis production tool
- TEDI, assisting production of supply data
- EVE, electronic documentation viewer
- TCI 3D, illustrated ergonomic catalaogue on a 3D base

● DESIGNING DIGITAL SUPORT
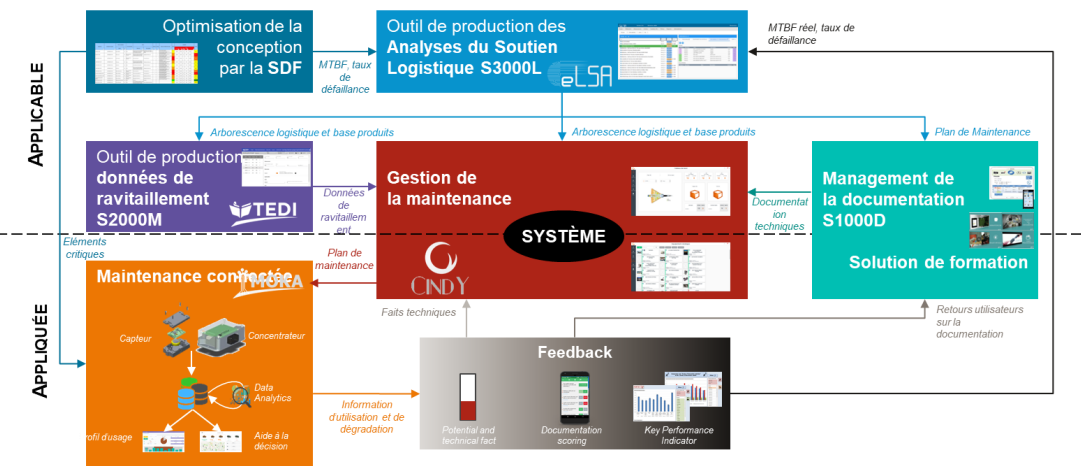
● TECHNICAL DOCUMENTATION: FROM DESIGN TO OPERATION

Etudes du soutien

Spécification

Production & Validation

Exploitation

Analyse du Soutien Logistique

ELSA, l'outil LGM développé par et pour les experts ASL (S3000L)

Ingénierie Documentaire

Audit, définition de la structure, des règles de rédaction et de gouvernance d'un projet Spécification des contrôles / parsing Spécification d'outils

Word Modulaire

Franchir le cap du structuré modulaire

Data Management

Migration et transformation de données en automatique

Documentation de Ravitaillement

TEDI, l'outil LGM de production, contrôle et publication de documentation de ravitaillement (S2000M)

Contrôle linguistique

IS Checker : Automatiser le contrôle de la conformité de vos livrables

CI et Anim 3D

Optimiser la compréhension de votre documentation grâce aux modèles et animations 3D

EVA : Viewer

Visualiser la documentation technique normée et structurée (S1000D) Doc Mobile

Solution ADEO

Augmented Documentation for Enhanced Operators

Solution documentaire end-users terrain Digitalisation des processus métiers Amélioration de l'efficacité, traçabilité et sécurité Captation du REX terrain et transformation en valeur

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WHAT IF WE MONITORED WHAT OUR SYSTEMS REALLY ENDURED ?

This is the objective of MOKA, the solution designed by LGM and LGM Ingénierie through a range of HUMS sensors, data analytics and dedicated applications. Once our solution has been implemented, our customers can perform lean maintenance (predictive maintenance).

- Co'Sense sensor and Hub'Sense concentrator
- Fore'Sense Application
- CINDY Web, maintenance and fleet management tool
- ADEO digitalised maintenance

● OPERATING PERFORMANCE

MOKA - MAINTENANCE ORIENTED BY KNOWLEDGE & ANALYTICS (VIDEO)
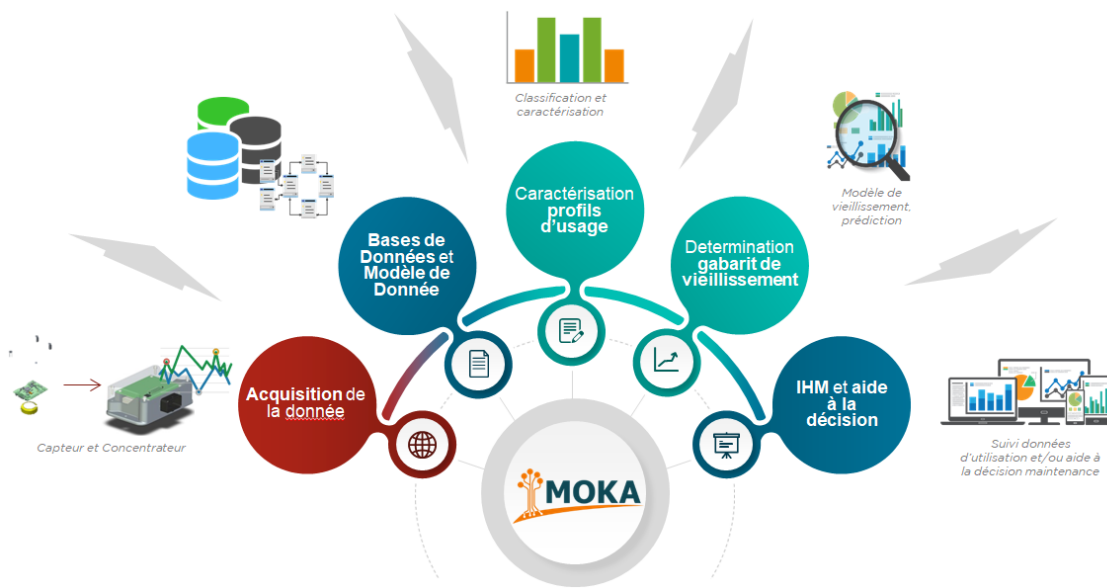
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● HOW TO DESIGN CRITICAL ELECTRONICS?

LGM Ingénierie designs and produces critical electronics in small to medium quantities.

Discover our offer on video

- **Embedded systems**
- **Test systems**

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● **WHAT IF 2.0 TRAINING WAS ALREADY HERE ?**

With decades of experience in training professionals reach their potential, LGM Digital assists its clients in the architecture and design of adapted and innovative training courses.

- Curriculum design tool
- Performing maintenance tasks in virtual reality
- Augmented reality training
- Serious Games
- Writing technical documentation and digitalisation
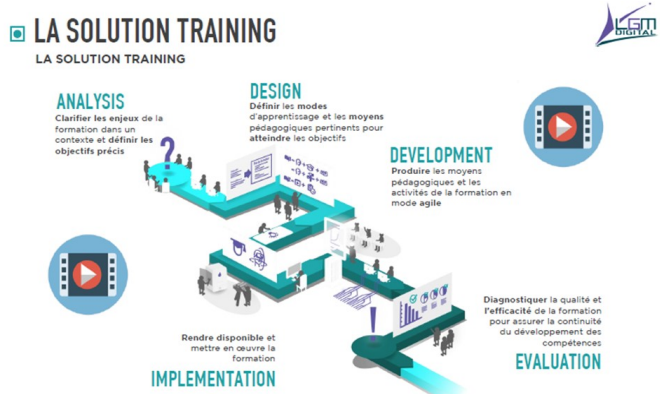- Media coverage offer

● **OUR TRAINING EXPERIENCE**

Even better than words, we invite you to discover our training offer on our dedicated website :
https://www.lgm-digit.fr/information_technique_training.aspx / http://trainingfactory.lgm-digit.fr/

LA SOLUTION TRAINING
LA SOLUTION TRAINING

ANALYSIS
Clarifier les enjeux de la formation dans un contexte et définir les objectifs précis

DESIGN
Définir les modes d'apprentissage et les moyens pédagogiques pertinents pour atteindre les objectifs

DEVELOPMENT
Produire les moyens pédagogiques et les activités de la formation en mode agile

IMPLEMENTATION
Rendre disponible et mettre en œuvre la formation

EVALUATION
Diagnostiquer la qualité et l'efficacité de la formation pour assurer la continuité du développement des compétences
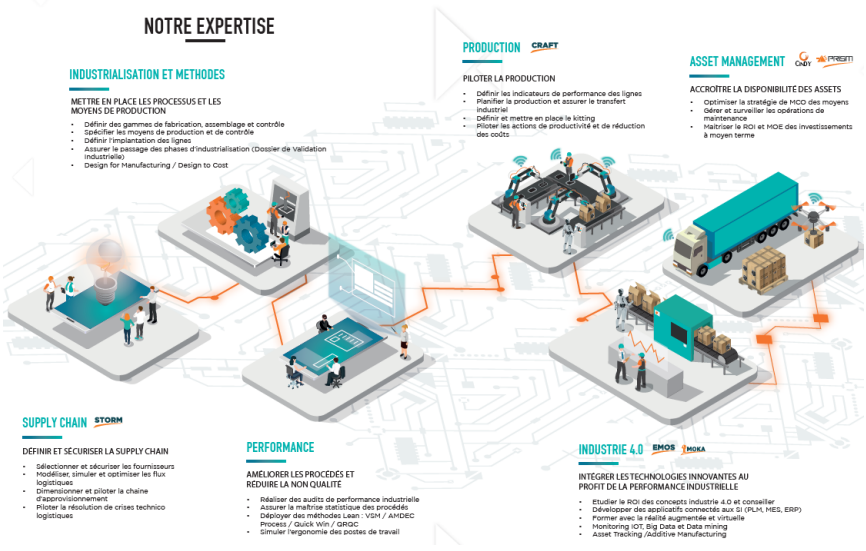
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● **HOW TO OPTIMISE INDUSTRIAL PERFORMANCE?**

Without the right skills and tools, it is difficult to juggle between supply lead times, costs, deadlines, guaranteeing the quality of every parts... LGM provides its customers with high-performance tools to make the best decisions:
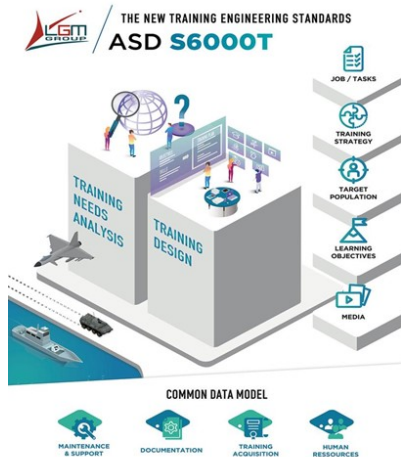
● **INDUSTRIAL PERFORMANCE OFFER AND ITS TOOLS**

Discover our our Industrial Performance offer on video

NOTRE EXPERTISE

INDUSTRIALISATION ET METHODES
METTRE EN PLACE LES PROCESSUS ET LES MOYENS DE PRODUCTION
- Définir des gammes de fabrication, assemblage et contrôle
- Spécifier les moyens de production et de contrôle
- Définir l'implantation des lignes
- Assurer le passage des phases d'industrialisation (Dossier de Validation Industrielle)
- Design for Manufacturing / Design to Cost

PRODUCTION CRAFT
PILOTER LA PRODUCTION
- Définir les indicateurs de performance des lignes
- Planifier la production et assurer le transfert industriel
- Définir et mettre en place le kitting
- Piloter les actions de productivité et de réduction des coûts

ASSET MANAGEMENT
ACCROÎTRE LA DISPONIBILITÉ DES ASSETS
- Optimiser la stratégie de MCO des moyens
- Gérer et surveiller les opérations de maintenance
- Maîtriser le ROI et MOE des investissements à moyen terme

SUPPLY CHAIN STORM
DÉFINIR ET SÉCURISER LA SUPPLY CHAIN
- Sélectionner et sécuriser les fournisseurs
- Modéliser, simuler et optimiser les flux logistiques
- Dimensionner et piloter la chaîne d'approvisionnement
- Piloter la résolution de crises technico logistiques

PERFORMANCE
AMÉLIORER LES PROCÉDÉS ET RÉDUIRE LA NON QUALITÉ
- Réaliser des audits de performance industrielle
- Assurer la maîtrise statistique des procédés
- Déployer des méthodes Lean : VSM / AMDEC Process / Quick Win / QRQC
- Simuler l'ergonomie des postes de travail

INDUSTRIE 4.0 EMOS MOKA
INTEGRER LES TECHNOLOGIES INNOVANTES AU PROFIT DE LA PERFORMANCE INDUSTRIELLE
- Etudier le ROI des concepts industrie 4.0 et conseiller
- Développer des applicatifs connectés aux SI (PLM, MES, ERP)
- Former avec la réalité augmentée et virtuelle
- Monitoring IOT, Big Data et Data mining
- Asset Tracking /Additive Manufacturing

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THE NEW ASD STANDARD S6000T

The new ASD Standard S6000T dedicated to #Training #Engineering is now published and available. LGM Digital is proud to have participated, in cooperation with several partners, in writing and developing this major evolution for standardising training in the industry. #LGMDigital is ready to support its customers with the implementation of S6000T in their programmes.

Learn more about the new ASD S6000T standard dedicated to training engineering in the following article: https://lnkd.in/dsPNNXR, written by Gilles Baudoux - Business Unit Manager and Training Business Manager— LGM Digital

WEBINAIR - VALUE-CREATING DOCUMENTATION

Value-creating documentation is possible with ADEO, the document production solution developed in partnership with Ermeo.

ADEO is based on an augmented documentation software (interactive, mobile and connected) proposed by Ermeo and combines it with five LGM business expertise to inject evermore value into the documentation production chain.

LGM Digital and Ermeo have organized two webinars on the subject in May.

THEME 1: INDUSTRIALIZING AND TRANSFORMING THE PRODUCTION OF AUGMENTED DOCUMENTATION.

- How to improve and industrialize technical documentation through document engineering.

- A demonstration of the module designed to automatically transform a Word document into a 2.0 documentation through Ermeo.

- Impacts on business from the automation of digitalisation.

THEME 2: DATA COLLECTION AND VALORIZATION.

- How to optimize your field operations: from the creation of a work order on LGM's CMMS to its realization on the Ermeo mobile application and the valorization of the collected data.

- How to connect your CMMS to Ermeo.

- How to use the data collected by Ermeo with Business Intelligence tools.

Couldn't make it to these webinars and want to know more about our solutions?

- **Replays are available here: THÈME 1 - THÈME 2**

- **Or contact our teams directly : contact.digital@lgm.fr**