

# AKBARI HAGHIGHI SINA

Etudiant

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Soutenance

**Date :** 28/06/2021  
**Heure :** 14:40  
**Lieu :** salle du conseil

Tuteur

DI MASCOLO Maria

Entreprise

FAURECIA SERVICE GROUP  
23-27 avenue des Champs Pierreux - 92000 Nanterre - FRANCE

DESCRIPTIF DE LA MISSION

Program Quality Intern: As a Program Quality Intern, you will organize and follow-up the quality system and Program Quality development

RESUME DU STAGE

Faurecia is a global automotive supplier with its headquarter located in Nanterre, France.  
Program quality management intern is participating in quality activities in the development phase of products from acquisition to the launch/Ramp up. Program quality management intern is involved in different activities in the field of quality:

1. Preparing monthly Faurecia Group Total customer satisfaction performance report (Plant & Program): This report contains the trend of several KPIs which are measured to indicate the TCS performance at the group level.
2. Tracking Faurecia's Business Groups' program status reports and checking consistency and correctness of communicated data.
3. Managing and following up all activities related to 10 Quality Basics in Engineering & Development Trainings.
4. A member of the Blockchain project: The blockchain project is an inter-company project and its goal is to improve the traceability of the parts in the entire supply chain.
5. Attending 2 weekly Program Quality Committee and presenting the activities and project progress and writing MOMs. Also responsible for following up the implementation of the decisions.
6. Tracking Program, Safety & Regulation alerts in group scale and reporting the details of alerts and related actions.
7. Preparing an overview of the digital end-to-end quality tools and their strengths, opportunities to improve, and ...
8. Preparing warranty overview including HR, organization, training, procedures, governance, KPIs, and implementing SWOT analysis based on the gathered data.
9. Participating in program quality leaders (PQL) empowerment:
  - 9.1. Writing PQL job description (Junior, Senior/Global PQL)
  - 9.2. Gathering PQL work packages in different business groups and performing gap analysis.

# ARNOLD HUANCA MARIELA

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Tuteur

RIEL Andreas

Entreprise

ID partner  
20 rue Olympe de Gouges - Saint Martin d'Hères, - 38400 Grenoble - FRANCE

DESCRIPTIF DE LA MISSION

Comparative efficiency, use study, and market research for a milk pasteurizer with and without induction heating

RESUME DU STAGE

"Analyse de la performance et étude de marché d'un pasteurisateur du lait par induction "

Le traitement thermique du lait est un des éléments les plus énergivores de l'industrie agro-alimentaire. La société française ID Partner, société spécialisée dans la conception de systèmes de chauffages innovants destinés au process industriel de l'agroalimentaire, la cosmétique, la chimie/pétrochimie et de l'industrie pharmaceutique, a développé un pasteurisateur à induction adapté aux petites et moyennes exploitations agricoles capable de réduire la consommation électrique du process de manière très significative et contribue à décarboner l'industrie des process.

L'objectif de ce travail de stage était d'analyser la performance de ce pasteurisateur « Brancher & Pasteuriser », ainsi que les défis de sa mise sur le marché. La structure « éco business model canvas » a été choisie pour étudier en détail la valeur ajoutée de ce produit dans un contexte potentiel d'un système produit-services, le process et les ressources requises pour son déploiement sur le marché, ainsi que le modèle d'affaires sous-jacent.

# BRÚ VERT FRANC

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**Date** : 02/07/2021  
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Tuteur

CHEVRIER Pierre

Entreprise

Jet Cycle  
12C Rue du Pré Faucon - ZAE les Glaisins - Annecy-le-Vieux - 74940 ANNECY - FRANCE

DESCRIPTIF DE LA MISSION

Ingénieur Performance Industrielle

RESUME DU STAGE

JetCycle's new foil cycling craft, the JetCycle Max, is set to hit the market in the 2021 summer season. This innovative, ambitious idea was born from a discussion between a former Tour de France director and a town mayor in the Pays de la Loire region in 2012, and it was soon delegated to the Savoie Mont Blanc University for its technical development. After the construction of 2 prototypes in 2016 and 2018, the level of maturity of the project caught the attention of institutions and investors willing to contribute to the success of the JetCycle.

The year 2020 was a remarkable year for the project, with the creation of the company in October and the progress of the industrial prototyping phase, in which key industrial partners were secured for the stages that would follow: product validation and small to middle scale industrialisation.

The mission of the internship was defined for the kick-off of the industrialisation phase of the JetCycle Max, with the objective of establishing the basic methodology of the industrial process around the craft. As part of the on-boarding, the first weeks of the internship concerned testing and improvement of the industrial prototype that would lead to the final validation of the product.

Such advancements and the encountered difficulties have been reported and documented in detail to keep track of the progress of the project. During the product validation phase, the coordination with the aforementioned industrial partners (foil manufacturer, composite materials expert for hull construction, industrial designer) was crucial with regards to the commercialisation of an impeccably finished and fully functional product, which would be situated in the high price range of the nautical leisure sector.

The internship will conclude with the conception of a stock management system for the small and middle scale industrialisation, the definition of the quality acceptance criteria for each of the sub-assemblies and the delivery of a first BOM optimisation (internal documents), as well as the external documents that will complete the JetCycle Max's package: warranty, user's manual, and regulation compliance certificates.

# CAMPIGOTTO LUCA

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Tuteur

Entreprise

LUXOTTICA SRL  
Via Valcozzena 10 - 32021 Agordo - ITALIE

DESCRIPTIF DE LA MISSION

Nickel release and its directives: study of properties and applicability of Nickel-free steels and low-Nickel-release alloys for eyewear applications

RESUME DU STAGE

Nickel (Ni) is responsible for the most common metal-related contact allergy in Europe, affecting 14.5% of its population (Ahlström & Al., 2016). Spectacles frames are reportedly one of the leading causes of nickel contact allergy (Johansen & Al., 2009), as nickel alloys are widely employed by eyewear manufacturers to produce frames that conform to demanding structural and aesthetical requirements. Luxottica is a global leader and market leader in the design, manufacture and distribution of fashion, luxury, sports, and performance eyewear. The work is centred on the research, procurement, study, and implementation of nickel-free and low nickel release alloys as alternative to the nickel-containing alloys currently employed in the company. Two material categories are considered, Nickel-free and low-nickel release steels and Nickel-free copper alloys, focusing the analysis on the sheet metal format. After their selection and procurement, the materials are characterized in terms of mechanical, technological, and nickel-release properties. Commercial components made with the conventional metals are then reproduced with the alloys in analysis, to assess their manufacturability and compliance with the nickel release regulations. It is proposed a final comparison between the state-of-the-art materials and the investigated alternatives, allowing to understand the applicability of the selected Ni-compliant alloys in the eyewear field. The subject of this thesis work well represents the sustainability efforts made by Luxottica, as the company vision is centered on guaranteeing the social wellbeing of the people. In this sense, employing frames safe from the nickel sensitization perspective would increase the health wellbeing of its customers, following Sustainable Development Goal (SDG) 3 of the Sustainable Development plan set by the United Nations 2030 Agenda.

# DESAI VIRAJ NITINKUMAR

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Tuteur

HUBAC Stephane

Entreprise

Faurecia Group  
23 Avenue des Champs Pierreux 92000 Nanterre - 92000 Nanterre - FRANCE

DESCRIPTIF DE LA MISSION

Systems Quality internship at Faurecia

RESUME DU STAGE

Being amongst the top automotive supplier, Faurecia is having 266 plants liaising in 5 different business groups such as Faurecia Clean Mobility (FCM), Faurecia Interior Systems (FIS), Faurecia Seating (FAS), Faurecia Automotive Systems (SAS), Faurecia Clarion Electronics (FCE). A transformation strategy of Faurecia is mainly focused on 2 fast growing areas: Sustainable mobility and Cockpit of the future. The global approach is to achieve total customer satisfaction which is driven by operational excellence named as Faurecia Excellence System (FES). Driving customer satisfaction, sustainable competitiveness and talent development within a safe environment are the priorities which is being focused by evolving FES principles based on predefined FES house. One of the bricks of this FES house is about "Built in quality". The paramount principle of "Built in quality" is to produce zero defect at any time enhancing customer perception. To achieve that, 11 basic principles has been defined.

Working under end-to-end quality director, my primary task is to consolidate the deployment of quality basics that has introduced in these FES principles each month from 266 plants all over the world. For continuously improve the performance by arranging follow up review meeting with all Operation Quality directors, key task is to develop global file having all functional data of worst plants to further move for implementing an FES audit.

Involving in the talent development within an organization is another responsibility and main function is to track the competency deployment process of employees based on their levels.

Lastly, secondary task is to standardize Faurecia Core Procedure (FCP) documents to achieve robustness within the documentation process on common platform named Faur'us for all Faurecians.

# ELUWAH NOBLE AMAH

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Tuteur

TOLLENAERE Michel

Entreprise

Campus d'Enseignement Supérieur et de Formation Professionnelle  
LINEACT Laboratory, CESI Rouen Campus Rouen - FRANCE

DESCRIPTIF DE LA MISSION

Multi-objective simulation and optimization of a 4.0 multi-modal logistics platform on the Seine axis

RESUME DU STAGE

The PLFADDT project aims to create a logistics zone 4.0 capable of meeting the challenges related to land use planning strategies, the needs of the plant of the future, and environmental and societal issues. One or more logistics centres 4.0 will be set up in the Seine Valley to promote the multimodality of transport resources, include renewable energies, and create activities with added value.

The creation of this new platform will have a significant effect on existing installations and flows. The measurement of these effects is not obvious because of the complexity of the interactions between the different elements of the system and the slowness of the effects. Simulation coupled with optimization is an interesting technique for predicting the behaviour of complex, slow, and dynamic systems.

# FATIH IMANE

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Tuteur

TOLLENAERE Michel

Entreprise

Schneider Electric  
Schneider Electric Indus. SAS, 31 rue Pierre Mendès-France, 38320 EYBENS - 38320 Grenoble - FRANCE

DESCRIPTIF DE LA MISSION

Projet de fin d'études en organisation industrielle: projet de réorganisation au sein d'un atelier d'assemblage en moyenne et basse tension.

RESUME DU STAGE

Contexte : le projet s'intitule Étoile est a pour but de réaliser un transfert industriel, de deux usines : Centre Ecofit Mâcon et Centre disjoncteur Montpellier, pour en faire un seul hub qui deviendra à partir de Juillet 2021 le Smart Ecofit France à Grenoble. Cette usine qu'on appelle Eco-fit a pour objectif de recycler/rénover/réparer les appareils électroniques pour les revendre.

Dans le cadre de ce transfert industriel, mon objectif en tant que manager Insourcing logistique :

- o Créer la base documentaire des prestations Logistiques opérationnelles Smart Ecofit - Mise à jour de l'existant et création des manquants.
- o Contrôler la bonne maîtrise / connaissance des processus par les opérationnels.
- o Définir les parcours de formation en fonction de la matrice de compétences.
- o Organiser la formation des opérationnels logistiques sur la base des nouveaux modes opératoires (MM & WMS).
- o Animer, piloter, coordonner et faire le reporting des sujets logistiques opérationnels.

J'ai effectué deux déplacements dès mon entrée en entreprise ; le premier à Lattes et le deuxième à Mâcon. Pour définir dans un premier temps, la liste des procédures logistiques, et les différentes opérations/activités .

# GIRI SURENDRAN HARI HARA KRISHNAN

Etudiant

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Tuteur

CUNG Van dat

Entreprise

L'Oréal  
9 rue Pierre Dreyfus - 92110 Clichy - FRANCE

DESCRIPTIF DE LA MISSION

Direction Général des Opérations- Supply Chain Transport

RESUME DU STAGE

As a part of my internship at L'Oréal, I mainly help my team to manage the transportation flows between factories and warehouses (Inbound flows) with the help of Transport Management System (TMS) software. As a part of my operational work I help my team to validate costs posed by the carriers, modify the errors from the TMS database and mainly prepare Invoices for the transporters at the end of each month. Also I monitor specific KPIs that are relevant to Inbound flows to ensure the performance of the truck flows.

As of administrative tasks, I am working on a project to automate the invoicing process for EMEA zone. This part involves me talking to the internal IT team and also the external partners, consultants about our needs to automate and to provide the most appropriate and practical solution for the needs of the project.



# IBARRA RAMIREZ AYLEEN

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Tuteur

RANNAZ Laurent

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ESSITY FRANCE  
151 Boulevard Victor Hugo - 93400 Saint-Ouen - FRANCE

DESCRIPTIF DE LA MISSION

Assistant Logistique

RESUME DU STAGE

In today's highly changing and competitive environment, companies are under pressure to optimize their supply chain to better respond to customer demand. However, supply chains are susceptible to unforeseen events that make responsive supply chain management a challenging task. One of those disruptive events is the shortage of products.

In this project, I analyze historical data from Essity to find the product categories that have the most disruptions in the supply chain. Then I select the category that I will analyze considering its level of service (the orders received versus the orders delivered) and its share in the total sales volume.

Once selected, through a root cause analysis I identify the factors that contribute to these shortages to propose improvements that will lead to an increase in the level of service for that category.

At the end of the project, as additional support to justify the decision to implement the proposed improvements, I will evaluate how logistics costs increase each time the level of customer service is reduced by 1%.

# KUTTIKATTIL EDWIN DEVASSY

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Tuteur

Entreprise

ArceIorMittal Maizières Research SA  
Voie Romaine - BP 30320 - 57283 Maizières-lès-Metz Cedex - FRANCE

DESCRIPTIF DE LA MISSION

Effect of annealing conditions on microstructure and mechanical properties of new high-ductility dual phase and complex phase steels

RESUME DU STAGE

The goal of this thesis is to investigate the effects of the thermal processing route on the microstructure and mechanical properties of new cold-rolled Dual-Phase (DP) steels currently being developed under the family of Advanced High Strength Steels (AHSS). These steels which combine good formability and high strength are of great interest to the automotive sector attributed particularly to the significant weight reductions achievable and the growing demand to meet stringent environmental standards.

Compared to conventional DP steels, these new Dual-Phase steels offer both improved global and local ductility. Chemical composition slightly enriched with certain alloying elements and the introduction of partitioned martensite, low temperature bainite and retained austenite constituents, thanks to specific annealing profiles, improves ductility while keeping similar strength and welding behaviour as conventional DP steels. The steel grade under concern is currently being produced in a complex processing line specifically conceived for steels of newer generations. However, it becomes important for these grades to be produced in less complex processing lines to improve product robustness and expand production.

Phase transformations in Dual-Phase steels which follow the controlled thermal cycles play an essential role in the formation of final microstructure and mechanical properties of the product. Notably, insights on cooling profiles and quenching temperature furthers avenues to produce these grades in less complex lines. To this end, dilatometric techniques are exploited to follow the phase transformation kinetics and substantiated using microstructural characterization and mechanical testing enabling to establish a process window for each step of the metallurgical route. The outputs of this study will thus contribute to the design of these new grades and conceive a robust product.

Keywords : High-Ductility Dual-Phase Steels . Dilatometry . Phase transformation kinetics

# LODHIYA NIKUNJ PRADIPBHAI

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TOLLENAERE Michel

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Valeo Transmission Systems  
81 Avenue Roger Dumoulin - CS70926 80009 - FRANCE

DESCRIPTIF DE LA MISSION

Industrial Management Assistant

RESUME DU STAGE

Company: Valeo.  
Position Title: Industrial Management Assistant  
Thesis title: "Industrial Production Point Capacity tool and Budget development"

#### ABSTRACT:

Management of information systems is one the key factors to facilitate and attain efficient decision making in an organization. Therefore, the management of databases and control of data are very crucial issues. During my 6-months internship period with Valeo, I was exposed to a practical oriented and real corporate world atmosphere. I worked on various information system modules and earned operational experience on Google database tools. My internship program had three main objectives to improve PTR Data base:

1. Creation of 5 Axes reports as well as monthly industrial reports in order to achieve operational excellence and customer satisfaction.
2. Development of budget files according to the New Year specification. Budget/Capex Tool, a financial planning tool for Global use and a decision support tool for Executive Management of budget allocations and adjustments.
3. Creation of Production Point Capacity tool in order to visualize production line capacity at micro level. This tool will be helpful to the site managers to plan production by utilizing resources efficiently as well as well-balanced workload on each production line. This tools basically provides opportunity to identify abnormalities of the production and necessary step taken to prevent them.

On the basis of my internship task results, Up to date Management information system play vital role in taking key decisions at operational as well as strategic level. MIS should be updated at certain time period and equip with new modules in order to process future complex data set. This project show me the importance of information management in project management in various domain of the organization.

Keywords: Management of Information System, Production capacity visibility at micro level, Google Spreadsheets, Production line utilization.

# LOPES BARBOSA JOAO CARLOS

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LGP2, 461 rue de la Papeterie, 38402 Saint Martin d'Hères Cedex - 38610 Saint Martin d'Hères Cedex - FRANCE

DESCRIPTIF DE LA MISSION

Life cycle analysis of alternative fibres in the development of high technical strength and high added value papers

RESUME DU STAGE

Life cycle analysis of alternative fibers in the development of high added value papers

This internship aims at developing a Life Cycle Analysis of different natural fibers used as raw materials in the production of high added value papers. The paper industry is responsible for 2% of direct carbon dioxide (CO<sub>2</sub>) emissions and is the 4th more energy consuming industry sector. In order to help an industrial partner to improve the end-use properties of their paper and to provide a product in accordance with the eco-design approach, an investigation of the environmental burdens of paper production is carried out using the Life Cycle Analysis to compare potential the current raw material and potential substitutes to be used in the papermaking. Life cycle assessment is a tool aimed at evaluating the environmental impact of a product system throughout its life cycle, from the extraction of raw materials, production stage, user usage, distribution and disposal. This Life Cycle analysis uses the cradle-to-gate approach and does not include the papermaking process, the user usage and disposal of the paper. This study uses data from scientific papers, data shared from the partner and from the database of SIMAPRO, mainly Ecoinvent3. In addition, a sensitivity analysis is performed to identify the most important parameters in the model and to improve the results interpretation. The results expected in this study is to find which of the alternative fibers would have less impact in the paper industry and to help partners in the pursuit of greener solutions that helps to decrease the environmental impact in the papermaking.

Keywords: eco-design, LCA, papermaking, alternative fibers, sustainability

# LOTSI SAMUEL

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DESCRIPTIF DE LA MISSION

Stagiaire Génie Industriel dans le secteur de la Santé

RESUME DU STAGE

The medical industry is a highly regulated domain due to the impact errors could have on activities therefore leaving a small margin for mistakes. As such as, companies in this domain are always seeking ways and means of improving their activities to ensure quality and safety. This project itself was proposed as a corrective and preventive action to evaluate the pre-clinical study process at NAMSA Lyon and optimize the flow and management of raw data. Pre-clinical studies are carried out to generate relevant data in support of the safety of medical devices proposed by clients.

In this project, a series of steps were adopted to ensure that decisions and sequence of activities were linked to achieve the final results. A model that represented the manner activities were conducted and the raw data used during pre-clinical studies was developed. The model provided insight and was further simplified with the aid of a decision matrix risk assessment (DMRA). The DMRA was used to segregate raw data into groups representing their risk when lost or misplaced. The simplified model focused on raw data with high criticality on activities when lost and this was further enhanced with assignment of actors that interacted with them. A qualitative study was then conducted to generate data to support initial assumptions and gain new insight. After analysing all the necessary data, some solutions were proposed to improve on activities.

Some of the solutions proposed include: a) automation of the activities of the study director. b) Raising awareness on the impact of raw data loss and mismanagement through lean ideology. c) Elevating the risk assessments procedure related to data integrity

# MANGUKIYA MAYUR VINODBHAI

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Entreprise

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DESCRIPTIF DE LA MISSION

Supply Chain Planning Internship

RESUME DU STAGE

The optimization of the supply chain is a real challenge for the industrial world, towards the globalization of the supply chain. This challenge for a supply chain engineering student is a real motivation to bring a strong added value to this field, based on his training in the field and his professional experiences.

Inventory reduction is an essential element in optimizing the supply chain and making the money tied up to flow in order to invest it in profitable projects. This report is written to provide relevant indicators and criteria to conduct and measure, stock analysis the goal of which is to find potential reductions in numbers and values. Based on the review of major existing stock rebalancing methods, it investigates a practical case study on a Schneider Electric plant. There by it shows the potential reductions that have been entered and the gain in value of these reductions.

In addition to the inventory analysis, the report presents actions for the continuous improvement of supply chain monitoring, first for monitoring the evolution of the stock. Then for monitoring the quality of service of all factories, these were created with the aim of improving performance monitoring. Finally, analysis work for the rebalancing of disrupted products between distribution centers was carried by rebalancing, decreasing Safety Stock, change in the logistic references for all factories and power product distribution centers

# MEDEIROS DE LUCENA LUIZA

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Tuteur

HUBAC Stephane

Entreprise

DECATHLON - Lille  
4 Rue Professeur Langevin - 59000 LILLE - FRANCE

DESCRIPTIF DE LA MISSION

Amélioration du process d'écoconception

RESUME DU STAGE

Decathlon c'est une entreprise bien connu en France pour son valeur de faire le sport accessible à tout.e.s. Et comme plusieurs d'entreprise aujourd'hui ils ont le compromis de faire que ses produits ont moins d'impact pour environnement. Decathlon est une grande entreprise, avec plusieurs sports et secteurs internes que fonctionnent comme bureaux indépendants qu'on une relation de travail B2B.

Le secteur lequel je travail s'appelle Ecolab et propose des études environnementaux aux sports. Ecolab se situe dans un grand bureau d'ingénierie - Techoff - que fourni des autres études techniques.

Ma mission c'est de regarder le processus de écoconception et trouver des améliorations autant que préparer ce processus pour un audit AFAQ d'écoconception. Le stage lie le coté qualité, amélioration continu et analyse de cycle de vie.

Après la première analyse de la grille AFAQ d'écoconception, l'entreprise avait déjà une note 635/1000, avec 74% de réponses positives. Pour le stage, quelques actions de court terme on été proposé (écriture de procédure pour formaliser le processus et audit interne, comme demandé par la grille). Mais pour bénéficier l'entreprise, c'est possible aussi de faire un plan d'action de moyen terme.

Pour amélioration continue du secteur, un workshop avec l'équipe était proposé pour aligner la problématique a travailler. Après ce workshop, autres secteurs peuvent se bénéficier de la même démarche.

# RAMESH ARAVINDH

Etudiant

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DESCRIPTIF DE LA MISSION

Lean Manufacturing Internship

RESUME DU STAGE

Description of the mission :

Lean Manufacturing Intern: FES X.0 Drive Performance Improvement and KPI Analysis

I was working as "Lean Manufacturing Intern" in Faurecia which is a Global Automotive supplier company based in Nanterre, Paris. The main objective of the internship is to continuously improve and drive performance of FES X.0 Cockpit.

The above objective is achieved in following steps:

1. By continuously diagnosing and improving digital tool for FES.
2. Analyzing the FES KPI's to provide benchmark for all plants and to identify the plants which are at risk. To conduct various statistics involving FES.
3. Updating the FES Fundamental Dashboard and FES X.0 Scorecard.
4. To standardize the core documents for FES.

Apart from this, I am also involved in finalizing the FES School presentation.

This will help the management to achieve the goal of competitiveness, while maintaining customer satisfaction, high efficiency and elimination of waste through continuous improvement.



# RODRIGUEZ DELGADILLO RODRIGO

Etudiant

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**Heure** : 13:30  
**Lieu** : salle du conseil

Tuteur

RIEL Andreas

Entreprise

EMSE  
158 Cours Fauriel - 42023 Saint-Étienne Saint-Etienne - FRANCE

DESCRIPTIF DE LA MISSION

Steering quality management towards sustainability in ram-up projects Research

RESUME DU STAGE

Complexity and competitiveness are two words that summarize the current state markets, and businesses need to respond and adapt to different changes across the latest trends and unexpected situations in the society. Furthermore, industrial and service companies are obliged to create special values to differentiate themselves from others. They also need to be able to compete in globalized markets, where it is not only about generating profits, but also about conserving the environment and maintaining social balance.

In this context, the presented work is part of a research project that aims at establishing a framework and decision aid for responding to unexpected increase in market demand. This involves adjusting the manufacturing system based on reliable data generated in real time and making the main influencing factors visible at the right point of time. To achieve this, companies need key indicators for managing the ramp-up phase with the required quality and sustainability, yet without compromising agility. The strategy chosen is based on the application of Six Sigma methodology.

Applying our methodology to a company in the additive manufacturing sector, we achieved significant improvements when optimizing their manufacturing system for ramp-up, especially with regard to its quality and sustainability performance.

Keywords: Ramp-up Management, Sustainability, Six Sigma, Manufacturing System.

# ROSALES MARTINEZ RUBEN DARIO

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Biomérieux  
5 Rue des Aqueducs - 69290 CRAPONNE - FRANCE

DESCRIPTIF DE LA MISSION

Stage 6 mois - Chef de projet Supply Chain

RESUME DU STAGE

BioMérieux is a French multinational biotechnology present in 44 countries and serving more than 160 countries through a large network of distributors. BioMérieux provides diagnostic solutions (reagents, instruments, softwares, services) which determine the source of disease and contamination to improve patient health and ensure consumer safety. Its products are used for diagnosing infectious diseases, cancer screening, and monitoring and cardiovascular emergencies.

Working in the Supply Chain Performance, the project consists of the aperture of a new Regional Distribution Center in Singapore, aimed to fully serve all the Asia-Pacific Region. On one side, as a project manager, the main objective of the internship is to prepare and ensure a good go-live of each one of the customers of the new warehouse. A good communication and coordination within the project core team and different areas involved is crucial for a good project development and execution. On the other hand, as part of the Supply Chain Work Package, the main objective is to ensure the Ramp up of the new warehouse inventory, planning shipments from other intercompany warehouses in America and Europe. For this, good coordination with ASPAC upstream team is of high importance.

Main tools: project management, inventory management, ERP SAP, demand forecasting, process mapping are the main tools used during the internship.

# SOLIGO NICOLE

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Tuteur

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Aquafil SpA  
Via Linfano, 9 - 38062 Arco - ITALIE

DESCRIPTIF DE LA MISSION

Development of a Nylon fibre suitable for 3D printing

RESUME DU STAGE

Aquafil is one of the leaders in the production of Polyamide 6. From 2011, they built a chemical recycling plant able to regenerate Nylon 6. In fact, nylon waste, such as old carpet or fishing nets, are recovered and transformed into a new yarn with the same characteristics as the one coming from virgin raw material. This innovative process has been called from the company, Econyl®.

Nowadays the company would like to expand its core business to other horizons, such as the 3D printing. For this reason, the main objective of my internship is to develop and modify the regenerated Nylon 6 to make it suitable for 3D printing market.

My internship is divided into four main parts: list of the 3D settings, characteristic of a suitable material for 3D printing, production and testing of the new material (printability test, mechanical test, thermal properties, rheology) and a final Life Cycle Assessment.

At first, I will focus my attention on the settings of the 3D printer to list all the parameters that I could change to better perform the print. After that, I want to identify the rheological, chemical, and mechanical characteristic of a material suitable for 3D printing applications. The third, and main part of my internship consists in the production of a modified Nylon 6 and in the performance verification during 3D printing. Finally, I will do an LCA analysis specially to compare our final product with the ones available on the market nowadays.

During this project I am supported by two academical tutors, one from the Grenoble INP and one from the University of Trento, and by an industrial tutor.

# SRINIVASAN PRADHEEP

Etudiant

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INSIDIX Imaging Technology  
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DESCRIPTIF DE LA MISSION

Planning and Management of supply chain and Logistics

RESUME DU STAGE

Application of Lean Six Sigma for Improving Process and Supply Chain Management at a French Hi-Tech SME

This abstract is to summarize the Supply chain Planning and management missions, carried out by Pradheep SRINIVASAN under the guidance of professor Andreas Riel at INSIDIX Imaging Technology at seyssins during the period of six months, from March/2021 to August/2021. This internship work started with designing and planning the production unit using CAD software (Solid Works) to best fit the place for an efficient workflow, and make the workplace visual and safe for the employees. This was followed by the implementation of 5S in the entire production unit. With the process I place, I started focussing on the supply chain by first understanding the company's ERP system that is based on an outdated version of ODOO, an open source ERP software. After a complete ERP system upgrade and re-configuration, I set up an appropriate data model, and filled all the data. In parallel I performed a Risk analysis (FMECA) to prioritize the problems in the supply chain according to their criticality using the concept of Supply Chain Risk Management (SCRM). Based on the outcomes of this risk analysis, I concentrated on the highly prioritized risks to propose and implement adequate mitigation actions. Finally, I assumed an active role in the planning process of the supply chain to manage the supplies and future demands in the industry (Calculation of Safety Stocks, Demand Forecast, Economic Order Quantity based on the current situation of the enterprise).

# THOTTIPALAYAM JAYACHANDRAN VINITH PRATIP

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Tuteur

DI MASCOLO Maria

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Milliken  
Spartanburg South Carolina - ÉTATS-UNIS

DESCRIPTIF DE LA MISSION

My internship is based on Supply Chain Management domain, in which I am a part of a team to set up Central Warehouse and also to forecast the materials for chemicals.

RESUME DU STAGE

Milliken is a diversified Multi - National company providing distinct textile, chemical and health care products. My internship as the Supply Chain Analyst focused on determining the Enterprise Resource Planning (ERP) factors for a global central warehouse. The missions concentrated on Material Requirement Planning (MRP) attributes like determining inventory model, stock levels and decoupling point. Since Milliken wanted to install its central warehouse in the country of its suppliers, it required an intern to find the standards of ERP to optimize the cost. The internship had three objectives and involved several researches to accomplish these objectives. The primary objective was to identify the type of inventory that Milliken is following. As the current inventory is handled by the 'rule of thumb', Milliken wanted to determine its inventory based on its current functions to optimize its supply chain. Once the inventory model had been identified, the task was extended in determining the stock levels for the corresponding inventory model in the central warehouse. The second task of my internship was to find the decoupling point in the supply chain. This is to concentrate more on the area where the lead time is higher and to take actions to minimize it. The third task is to assist in implementing Consensus forecast for better Sales and Operations planning. The internship not only honed my supply chain expertise but also served as a platform to bridge the gap between my academics and industrial environment. Through this internship, I had the opportunity to experience the practical difficulties while handling the flow of materials from procurement to sales.