



Factory Avatar



K&N EFTHYMIADIS Single Member SA
George Mavridis, Operations Director

Technology Forum 2024, 25.04.2024
Ioannis Vellidis Congress Centre
IFS Awards 2024



Πρόγραμμα
Κεντρική Μακεδονία
2021-2027



Table of Contents

- Company's Mission & Vision, Values and Services, global presence
- Company's Innovation Initiatives, ESG, Other
- Challenge
 - Title
 - Challenge Description
 - Expected Results (company/society/environment)
 - Contact person responsible for the challenge

The company

- K&NE is a member of REDESTOS Agrotechnology group
- Started its activities in 1935 as K&N EFTHYMIADIS OE with the purpose of trading imported agricultural supplies, tools, seeds and ornamental plants.

Group's Mission

The aim of the Group is to engage in the field of Agriculture, in order to cover all needs of the farmer and the consumer alike, by offering an integrated package of products and services.

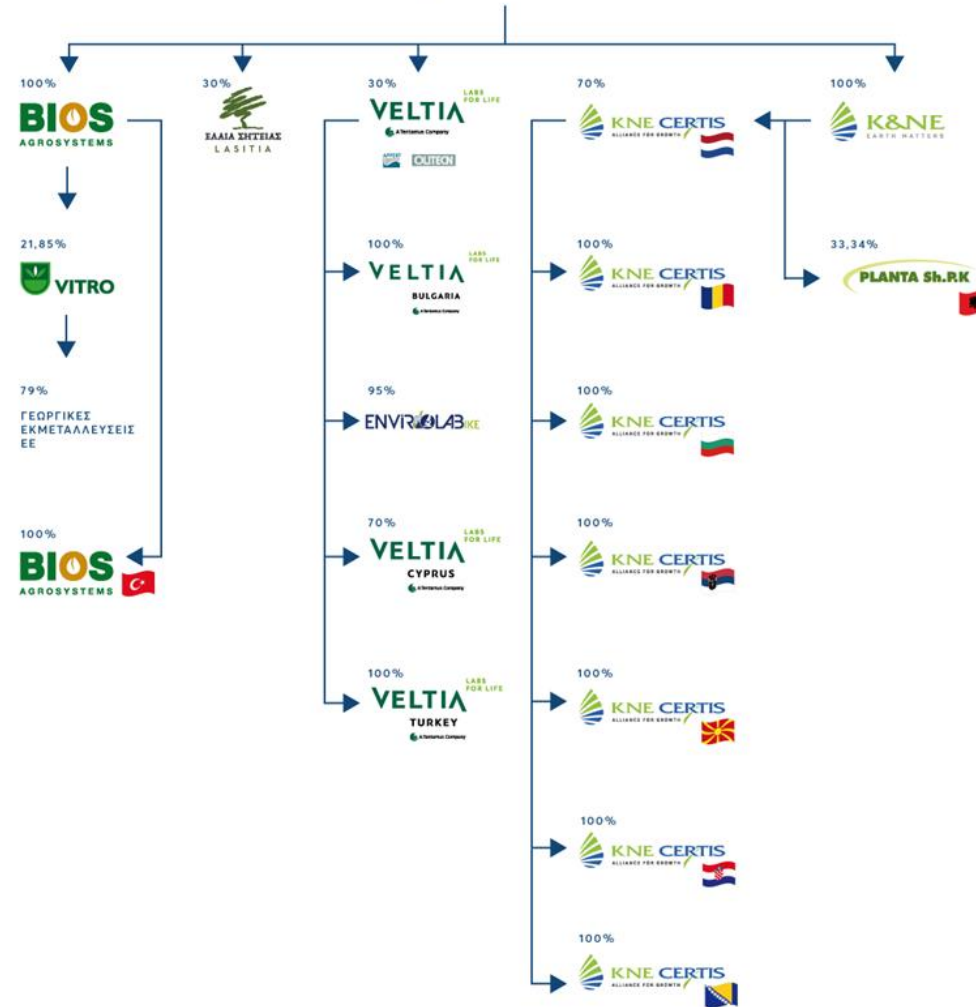


Πρόγραμμα
Κεντρική Μακεδονία
2021-2027



Group structure

- Plant propagation
- Plant Protection
- Analytical labs
- Food trade





- Formulation & Repacking of Plant protection products
- Toll manufacturing + 3PL services
- 133 Employees
- 53,4 mil Euro turnover (2023)
- Headquarters & Plant at Sindos
- Warehouse at Markopoulo Attica

- Quality Assurance System
- Environmental Management System
- Occupational H&S System
- Information security
- Authorized Economic Operator
- SQAS
- Seveso Upper Tier Plant

The challenge



Development of a plant's 3D visualization, including a part and eventually the whole of its buildings, infrastructure, networks, and equipment as a front end to a database consolidating in a Common Operational Picture, operations, maintenance, procedures and documentation necessary to operate the plant and to train employees.

Exploitation of modern imaging technology and gathering of big data at relatively low cost / TB providing the structured drill down to the relevant documentation of any point of interest and control, are required

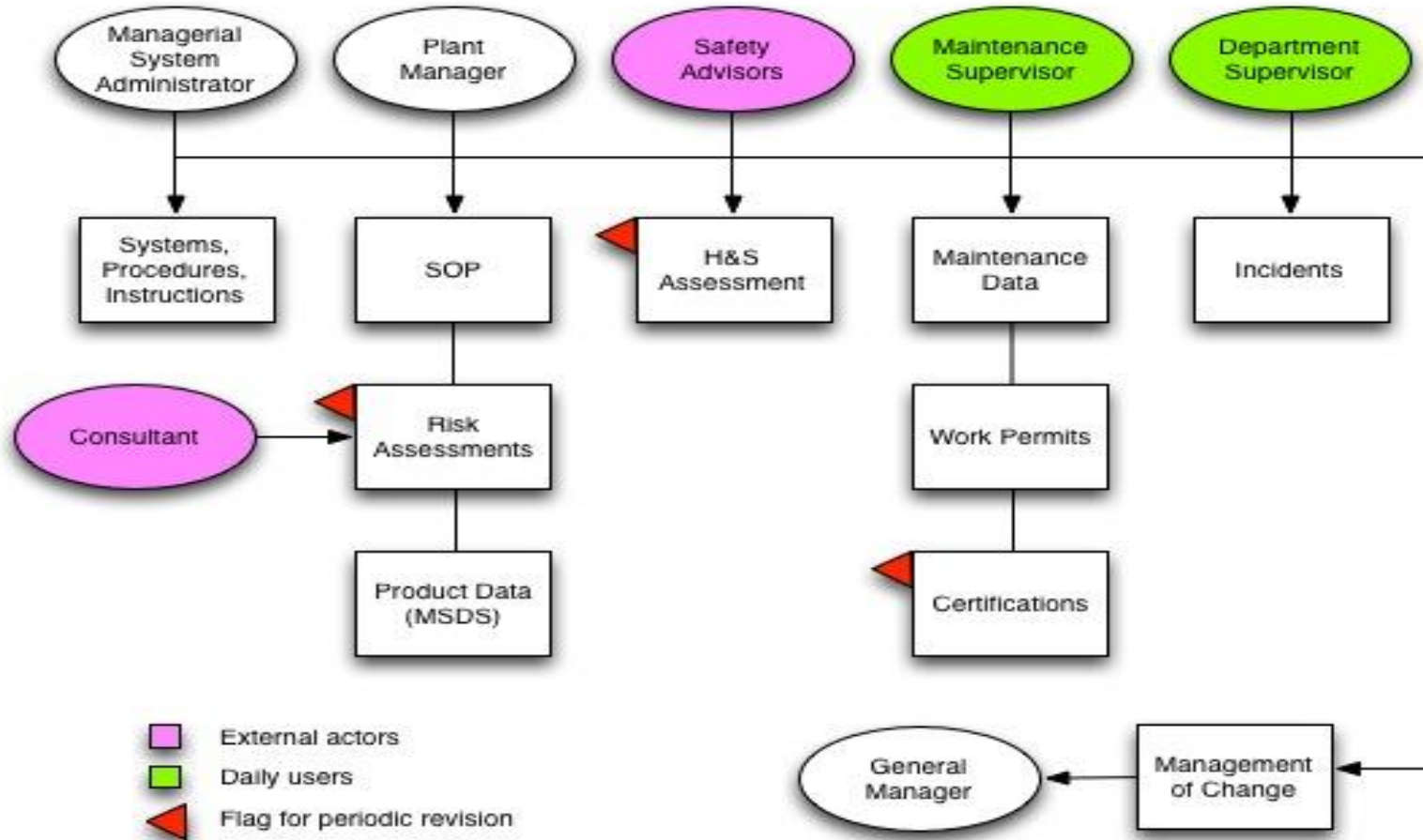
Originates from a prototype built during TOSCA EU-project back in 2015



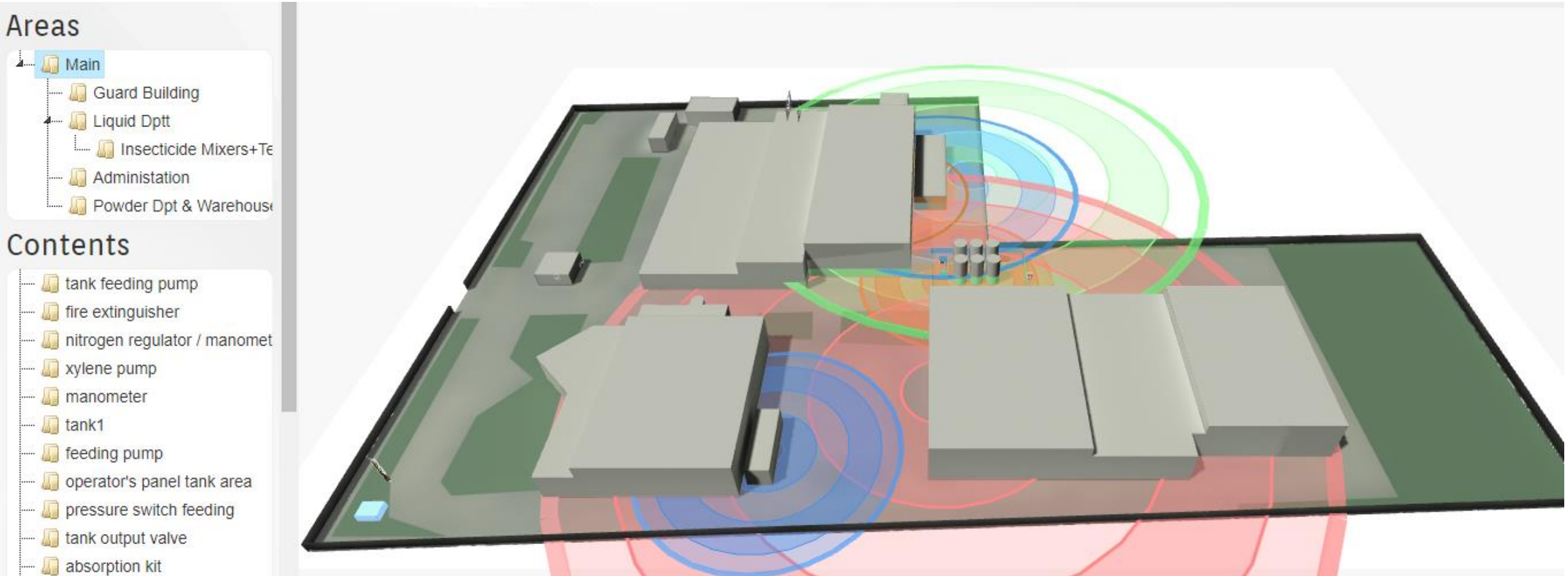
Πρόγραμμα
Κεντρική Μακεδονία
2021-2027



Connect pools of information and actors



Visualize the plant



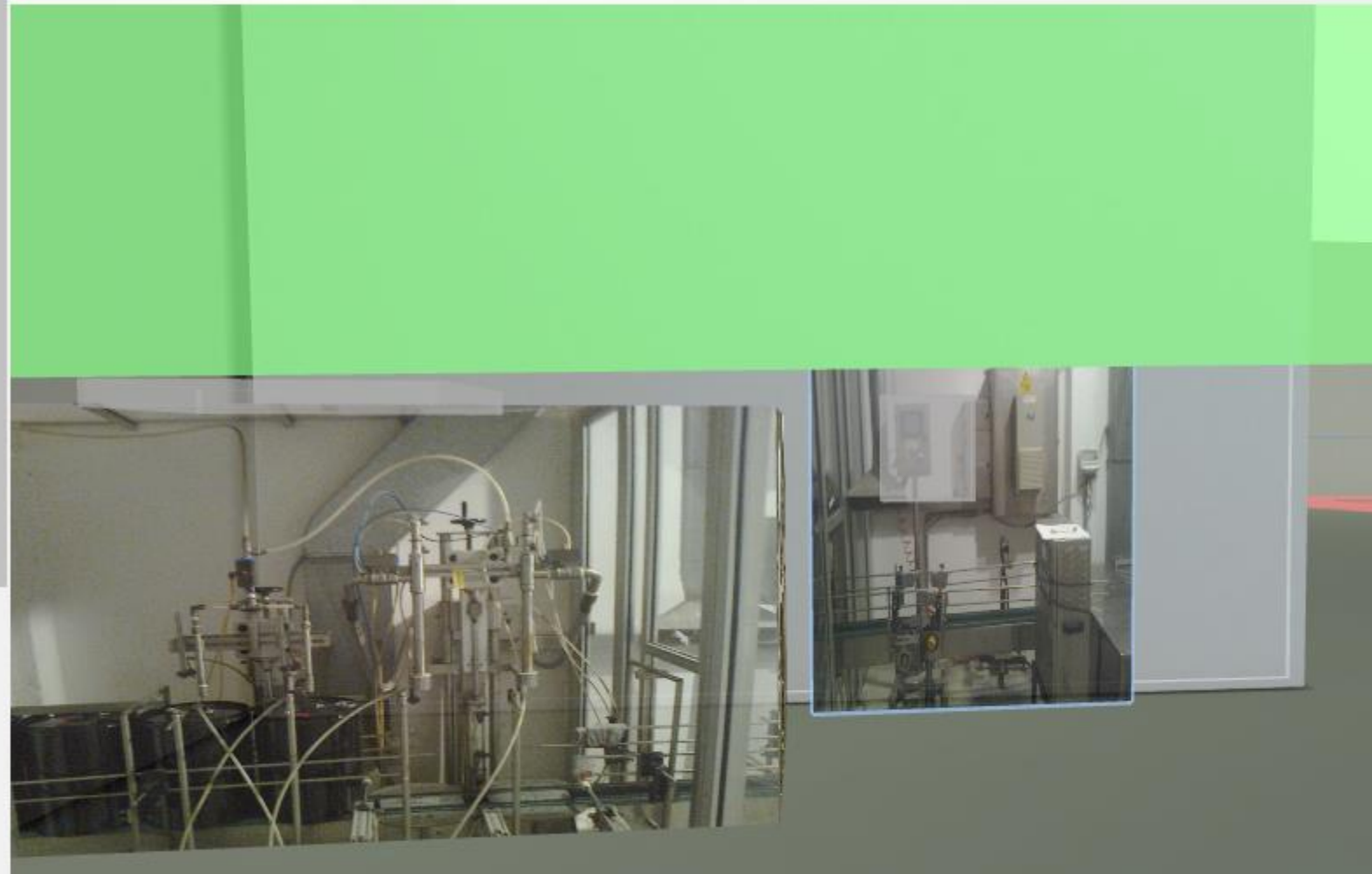
Focus on detail

Areas

- Main
 - Guard Building
 - Liquid Dptt
 - Insecticide Mixers+Te**
 - Administration
 - Powder Dpt & Warehouse

Contents

- telone packing line
- output**
- buffer tanks
- line feeding system
- Old mixer 5MT
- mixer 2MT
- New mixer 5MT
- TELONE BUFFER tank
- ATLOX buffer tank
- Foam tank & mixer buffer are
- Feeding collector
- input valve telone buffer



Connect and drill down to relevant data



InOV TOSCA Tools View Windows Help

Critical activities / barriers

- Time: Before the filling - Location: unloading workplace
 - The operator connects the grounding of the tanks with the truck and adjusts the discharge valve of the truck to the inlet valve of the tanks - Time: Before the filling - Before the filling - Location: unloading workplace [Bbe: 2, 4]
 - Management of the risk of fire - Time: Before the filling - Location: unloading workplace [Bbe: 47, 29, 46, 30, 31, 28, 41]
 - Operators put on the relevant PPE (gloves, mask and goggles) - Time: Before the filling - Location: unloading workplace
 - Select the tank to be filled by checking its volumetric index - Time: Before the filling - Location: unloading workplace
 - Stop the unloading
- The operator checks the valves and leaves open only the valves leading from the truck to the selected tank to be filled - Time: Before the filling - Location: unloading workplace
 - After the filling phase
 - The bulletin are recorded by the HSM
- Filling phase - unloading workplace
 - Disconnect the outlet of the truck
 - Filling phase - unloading workplace [Bbe: 55, 54, 53, 52, 41, 33]
 - Filling phase - Spark prevention and fire propagation prevention - unloading workplace [Bbe: 50, 8, 5, 6, 7, 9, 35, 49, 48, 44, 34, 28, 52, 41, 42, 51, 33, 36, 43]
 - Stop the unloading

Create Barriers

Filling phase - Spark prevent...

groupsInCharge

organisation	fullName
Fire team	Org/K&NE mother company / ...
Maintenance operator	Org/K&NE mother company / ...

Accreditation models

Barrier - LC maintenance tasks

n	LC maintenance tasks	Descript...	P
52	Operator to stop unloading		1
51	Pump availability (test, maintenance, inspection)		1
50	Alarm availability (test, maintenance, inspection)		1
49	Gas detectors availability (test, maintenance, inspection)		1
48	Grounding in tanks availability (test, maintenance, inspection)		1
44	Logistics of fire fighting system (test, maintenance, inspection)		1
43	Testing of fire fighting plan		1
42	Planning of fire fighting team		1
41	Planning - coordination		1
36	Tank side level tube availability (test, maintenance, inspection)		1
35	Differential pressure switch availability (test, maintenance, inspe...		1
34	Logistics of the Walki talkie		1

Restriction / obligation models

- No smoking
- No traffic
- PPE (glove, ...)

Record models

Display models

Proof models

Equipment (model) to be managed

Equipment model	State	D
AC	valid	0
Alarm in tank farm area	valid	0
DC	valid	0
Fire detectors	valid	0
Gas detectors in tank farm area	valid	0
Grounding of tanks	valid	0
Piping	valid	0
Sprinkler	valid	0

Projects impacting this critical activity

Incidents / accidents - Problem-solving

Graph(s)

bFDfType

Unloading process

Βασικά Στοιχεία

Αλλαγή | Διαγραφή

Κωδικός

Y022 GEM 01

Περιγραφή

ΓΕΜΙΣΤΙΚΟ

Τύπος

ΓΕΜΙΣΤΙΚΟ

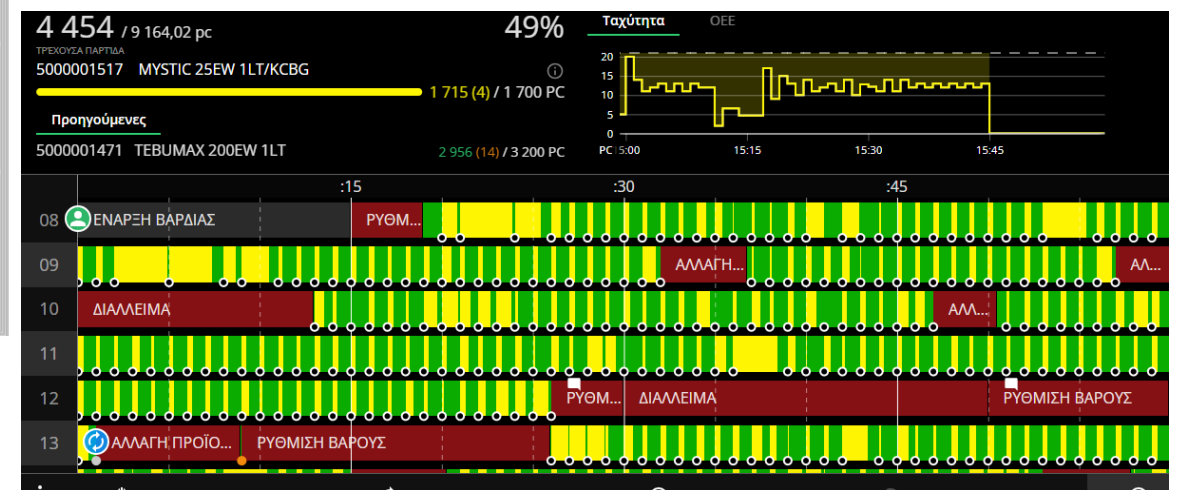
Τοπολογία

Y022 - TELONE -

Προληπτική Μετακινήσεις Ιστορικό Αλλαγών Μετακινήσεις Ένβητων Εργασίες Οχήματα

Εξοπλισμός

#	A/A	Περιγραφή	Ημερομηνία Δήλωσης	Ημ. Επιθ. Εκτέλεσης	Ημερομηνία Ολοκλήρωσης	Κατάσταση
Εξοπλισμός: Y022 GEM 01 - ΓΕΜΙΣΤΙΚΟ						
>	62	Συντήρηση διάταξης εμβόλων ATLOX	18/4/2023 8:03:00 πμ		19/5/2023 10:00:00 πμ	Ολοκληρωμέτ
>	177	ΜΗ ΣΩΣΤΗ ΛΕΙΤΟΥΡΓΕΙΑ ΑΖΩΤΟΥ. ΚΑΤΑ ΤΗΝ ΔΟΚΙΜΗ ΑΡΧΙΣΕ ΝΑ ΕΜΦΑΝΙΖΕΙ ΔΙΑΚΟΠΕΣ ΤΟ ΕΝΑ ΦΩΤΟΚΥΤΤΑΡΟ ΑΖΩΤΟΥ. ΒΡΕΘΗΚΕ ΕΞΩΤΕΡΙΚΑ ΤΟ ΚΑΛΩΔΙΟ ΝΑ ΚΑΝΕΙ ΔΙΑΚΟΠΕΣ. ΕΓΙΝΕ ΕΛΕΓΧΟΣ ΚΑΙ ΘΑ ΓΙΝΕΙ ΑΝΤΙΚΑΤΑΣΤΑΣΗ ΜΕ ΝΕΟ.	12/6/2023 1:00:00 μμ		14/6/2023 1:19:00 μμ	Ολοκληρωμέτ
>	180	ΕΡΓΑΣΙΕΣ CALIBRATION ΤΩΝ ΑΙΣΘΗΤΗΡΙΩΝ ΑΝΤΙΚΑΤΑΣΤΑΣΗ ΦΩΤΟΚΥΤΤΑΡΟΥ ΣΤΗΝ ΜΠΟΥΚΑΛΑ ΑΖΩΤΟΥ Νο1 ΚΑΙ ΛΟΙΠΕΣ ΡΥΘΜΙΣΕΙΣ ΚΑΙ ΔΟΚΙΜΕΣ.	14/6/2023 9:30:00 πμ		14/6/2023 1:17:00 μμ	Ολοκληρωμέτ



Πρόγραμμα Κεντρική Μακεδονία 2021-2027



Expected benefits



Development of a holistic, transparent database of the plant, which includes roles, documents, risk assessment, and tasks.

- Digitalization of the processes (cutting of the paper use)
- Systematic and real-time visualization of changes, interventions, and activities
- Training of personnel in a digital virtual environment
- Minimization of personnel and environmental risks.



Contact person



Γιώργος Μαυρίδης | Giorgos Mavridis

Διευθυντής | Director

Διεύθυνση Παραγωγικών Λειτουργιών | Operations Division

K&N EFTHYMIADIS Single Member S.A.

Industrial Area of Thessaloniki, P.O. Box 48,

570 22 Sindos, Thessaloniki, Greece

Tel. +30 2310 568656 / 568630 (dir.) Fax +30 2310 798423

Mob +30 6944 764083

E-mail g.mavridis@efthymiadis.gr



Πρόγραμμα
Κεντρική Μακεδονία
2021-2027



Thank you for your attention