


virospack

The
Dropper
Company



ENVIRONMENTAL
STATEMENT
2018

ENVIRONMENTAL DECLARATION 2018

00

CONTENTS



01	ORGANISATION DESCRIPTION	
	1.1 Over 60 years' experience	7
	1.2 Virospack, made in Barcelona	8
	1.3 In-house production and decoration	10
	1.4 Human asset, the main asset	12
02	MANAGEMENT AND POLICY SYSTEM	
	2.1 Management and policy system.....	15
	2.2 Policy	16
03	ENVIRONMENTAL PROTECTION COMMITMENT	
	3.1 Environmental behaviour	19
	3.1.1 Water.....	20
	3.1.2 Waste	22
	3.1.3 Emissions	28
	3.1.4 Electrical energy	30
	3.1.5 Gas consumption	32
	3.1.6 Consumption of raw material	34
	3.1.7 Consumption of solvent.....	36
	3.1.8 Consumption of packaging.....	37
	3.1.9 Biodiversity	38
	3.2 Assessment criteria for direct and indirect environmental aspects ...	39
	3.3 Significant environmental aspects	42
04	ENVIRONMENTAL PROGRAMME	
	4.1 Environmental programme.....	45
05	LEGAL COMPLIANCE	
	5.1 Compliance assessment.....	47
06	VERIFIER'S DATA	
	6.1 Verifier's data	53

01

ORGANISATION DESCRIPTION



1.1 OVER 60 YEARS' EXPERIENCE

Founded in Barcelona (Spain) in 1956, Virospack S.L.U. is a family-owned company that began its trajectory with the name Vicente Rodríguez Seguí, and was dedicated to producing rubber covers for pharmaceutical products, such as penicillin. 20 years' later, the company expanded its range of products by manufacturing rubber teats and massagers, caps and droppers, laying the foundations to what would later become Industrias Viros S.L.

In the mid-1980s, the company began exporting its products through Virospack Export, S.L., coinciding with the arrival of multinational pharmaceutical packaging companies into the domestic market. This change led to significant structural growth and considerable investment. Thus, the company continued innovating and expanding its activity by decorating its products using screen-printing and paint, which led to its specialisation in the high-end cosmetics packaging sector, focusing on the design, development and manufacture of droppers, value and missions that are still very present.

The company's activities expanded yet again in 2003 with the founding of Viros Vidre, S.L., which enabled to include tubular glass vials and pipettes into its already extensive catalogue.

Lastly, in 2010, the three companies Industrias Viros S.L., Virospack Export S.L and Viros Vidre merged, giving rise to the company we know today: Virospack S.L.U.

Since then, the company has continued advancing and investing in the future with an ambitious expansion plan and considerable investment, which has allowed for extending its facilities and improving its processes and products. On the other hand, Virospack's commitment to providing its customers with the best service, has led to the implementation of an Integrated Management System ISO14001, ISO9001 and EMAS, which ensure high quality levels with respect for the environment, striving towards sustainable development.



1.2 VIROSPACK, MADE IN BARCELONA

VIROSPACK S. L. U. is a European manufacturing company with two production centres in Catalonia, both in the city of Badalona. From these centres, the company exports its products to a long list of international cosmetic brands across the five continents, including a large number of the world's best-known and most prestigious brands.

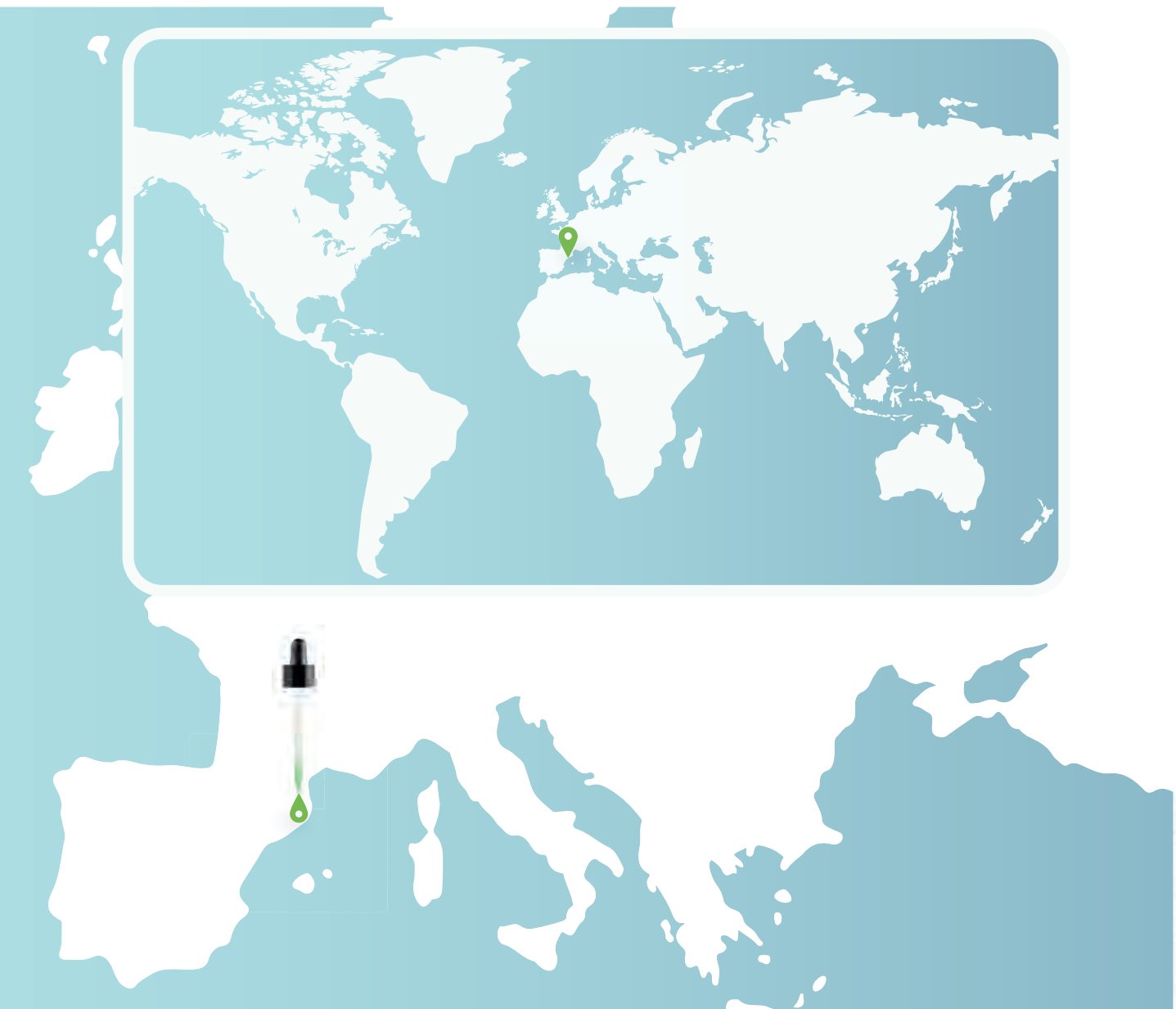


Figure 1. The company's location



Headquarters (Factory 1):

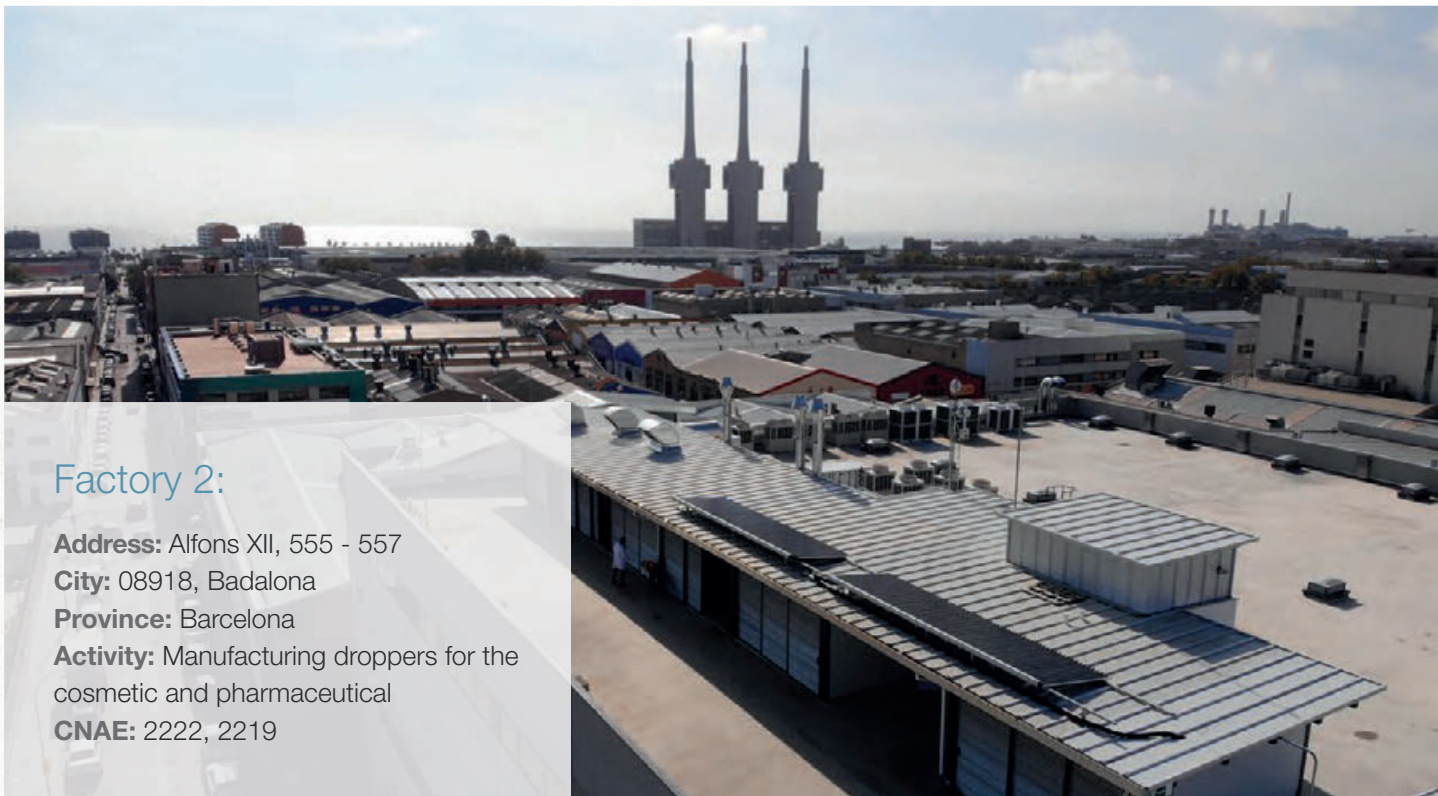
Address: Juli Galve i Brusson, 19

City: 08918, Badalona

Province: Barcelona

Activity: Headquarters, manufacturing glass vials and decoration of manufactured products.

CNAE: 2222, 2219



Factory 2:

Address: Alfons XII, 555 - 557

City: 08918, Badalona

Province: Barcelona

Activity: Manufacturing droppers for the cosmetic and pharmaceutical

CNAE: 2222, 2219

1.3 IN-HOUSE PRODUCTION AND DECORATION

Manufacturing droppers encompasses the following stages and processes:

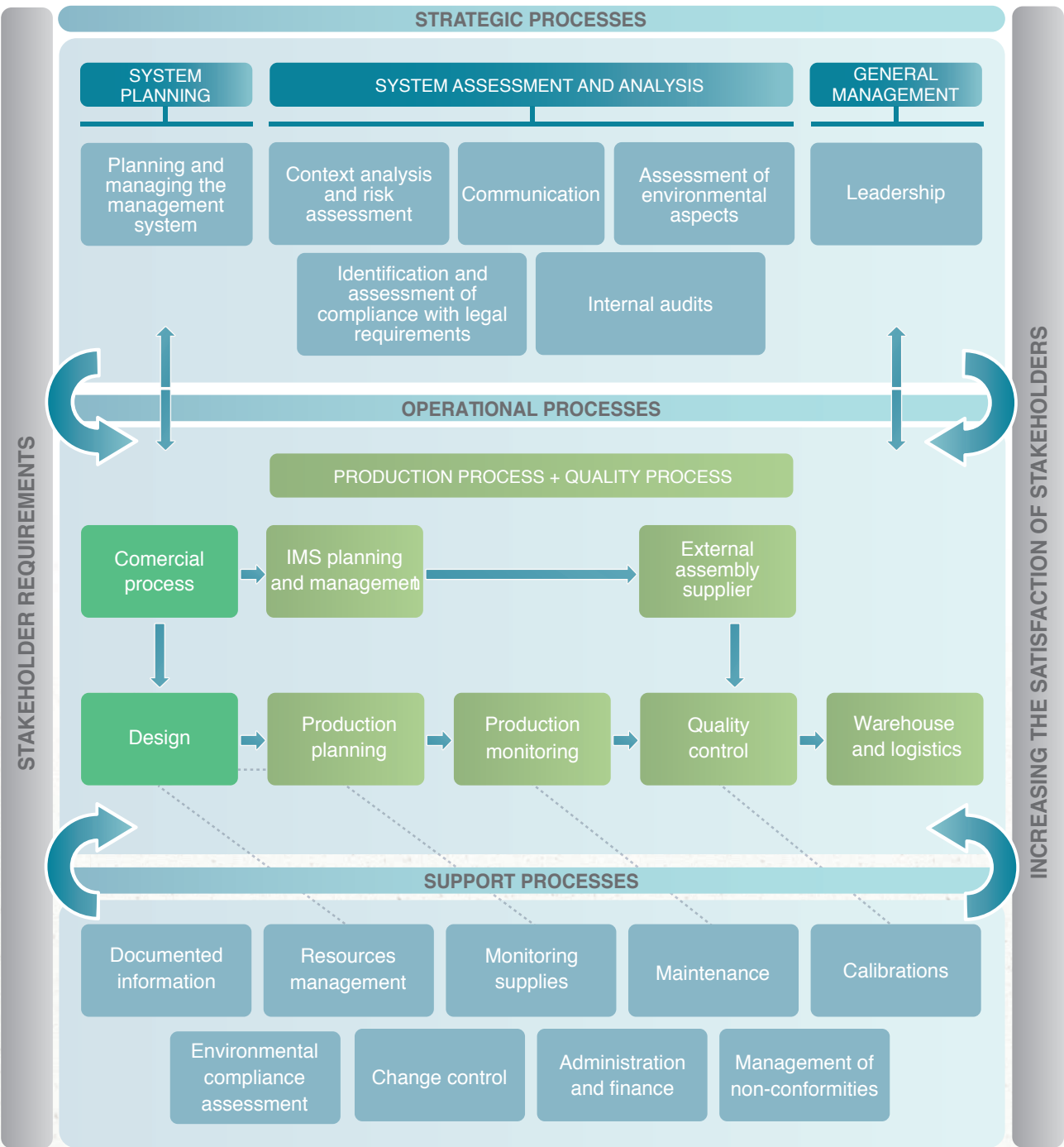


Figure 2. Process map

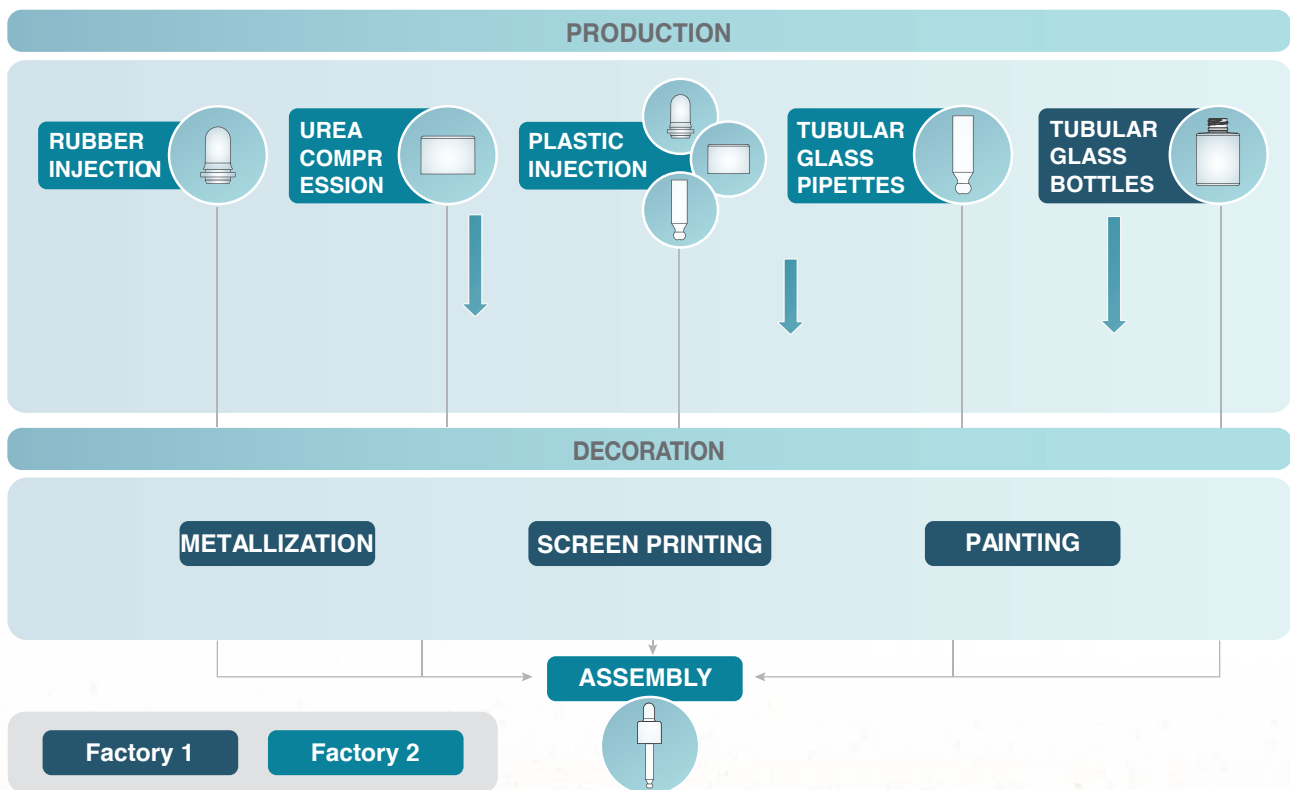
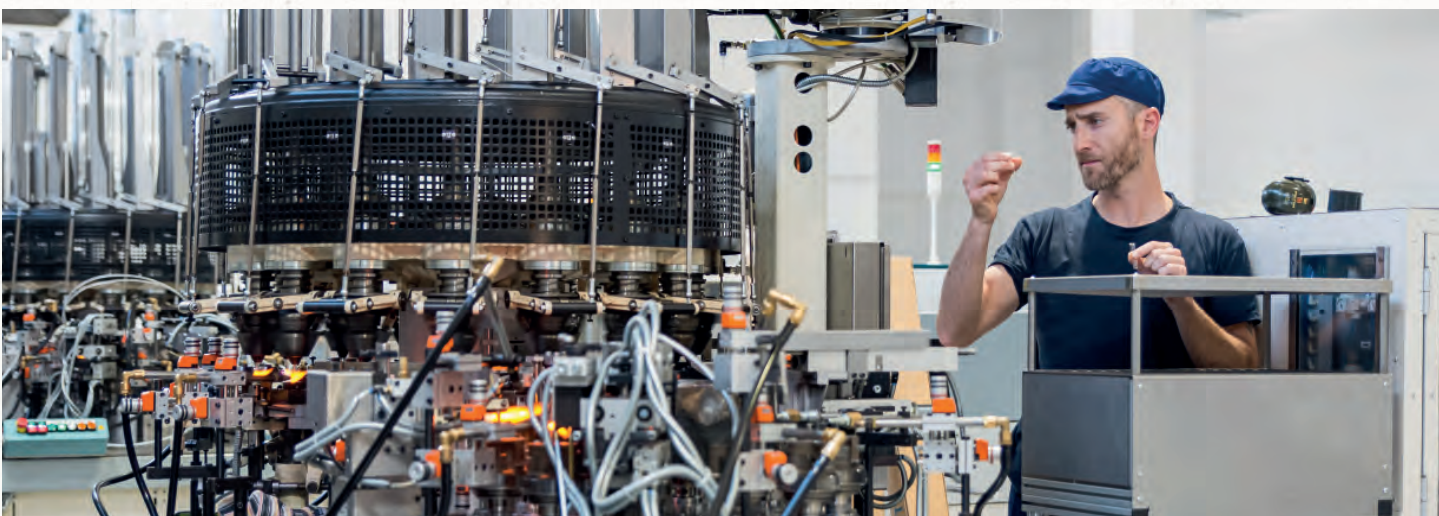


Figure 3. Stages of the production process



1.4 HUMAN ASSET, THE MAIN ASSET

In the awareness that its greatest value lies in its human asset, VIROSPACK is committed to supporting egalitarian and non-discriminatory work.

Based on a philosophy of service to the brands, commitment to continuous improvement and a high level of involvement, the team increases its performance day-by day, which in turn increases its stakeholders' satisfaction.

This success is based on providing an environment in which our employees can develop their skills and

balance their professional and family lives. We strive to encourage motivation and cooperation, as these are two essential factors for achieving the company's goals.

All departments within VIROSPACK are managed by highly professional people, with long-standing experience in the packaging sector.

Since this is a family-run business, the company has in-depth production knowledge, which is passed down from one generation to the next.



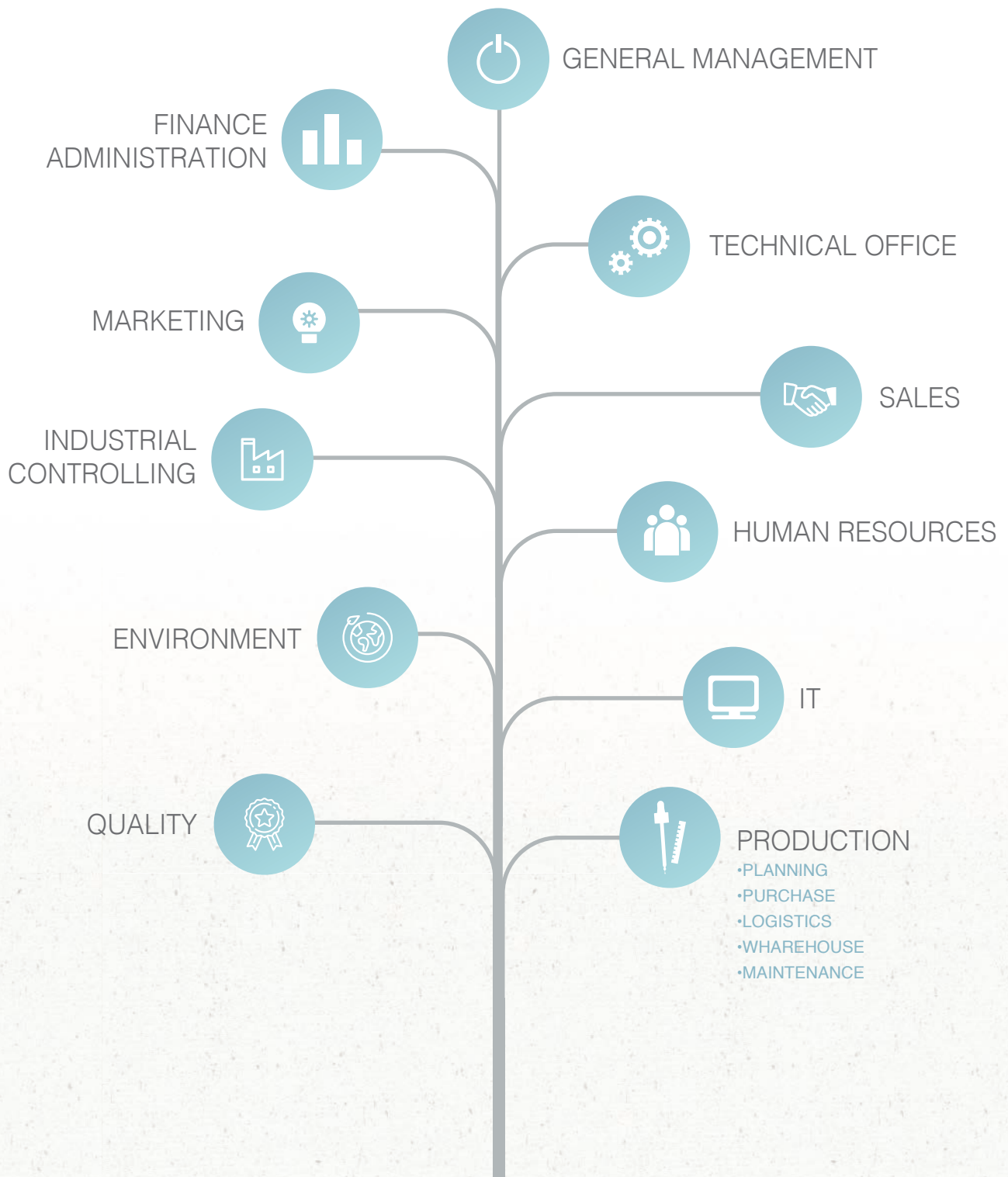


Figure 4. Organisational chart

02

MANAGEMENT
AND POLICY
SYSTEM



EMAS



2.1 MANAGEMENT AND POLICY SYSTEM

Since mid-2001, VIROSPACK has been implementing a quality management system in accordance with standard UNE-EN ISO 9001:2015, a certification which has subsequently integrated standard ISO 14001:2015 and Regulation (EU) 2017/1505 (EMAS), amending appendices I, II and III of Regulation (EC) 1221/2009.

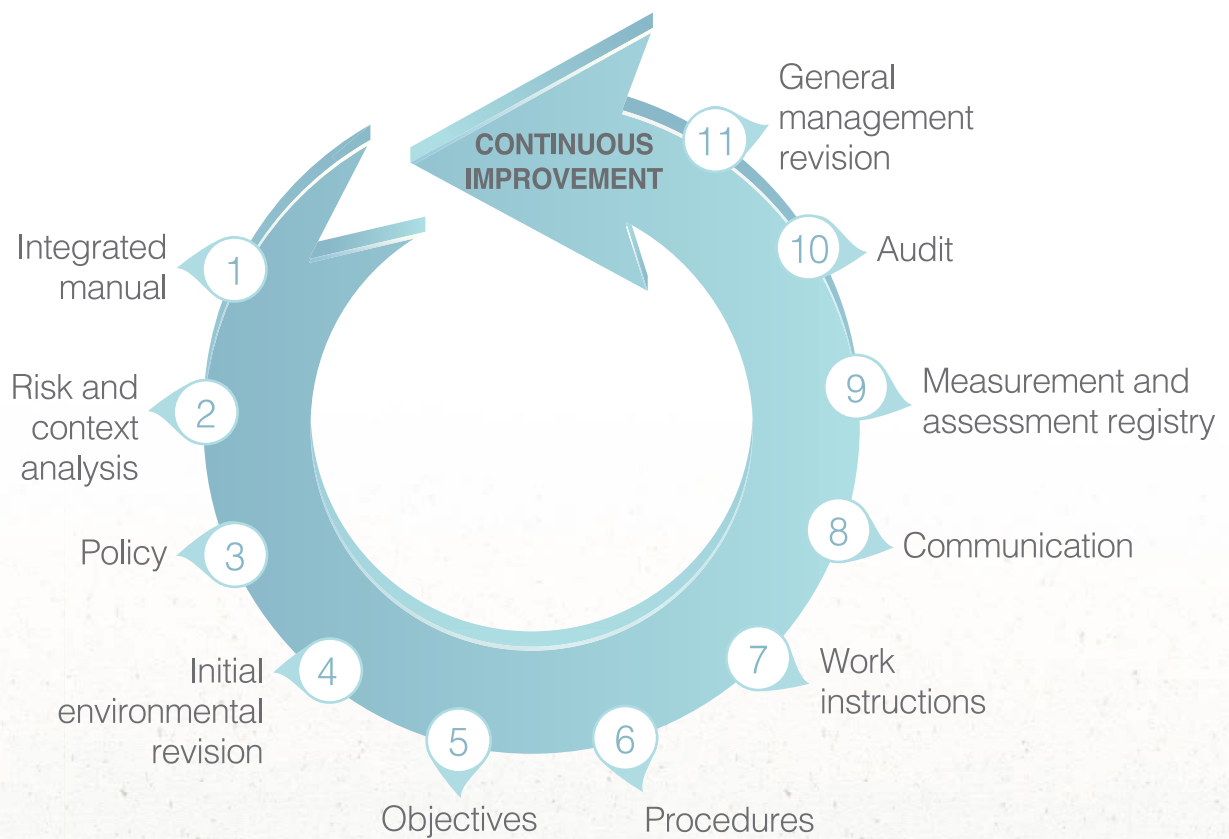


Figure 5. Management system documentation

The scope of the certification encompasses the design, manufacture, assembly and commercialization of packaging for the cosmetic sector in the factories of section 1.2.

2.2 POLICY

With the aim of ensuring the quality and commitment of our production process as regards protecting the environment, as well as the health and safety of our people, at VIROSPACK we have decided to implement and maintain an integrated quality and environment management system. Thus, on the basis of this integrated management system, we have defined the reference framework which sets and reviews the goals and targets.

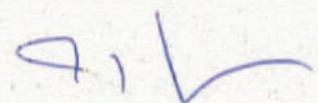
Through knowing and understanding the current market context, we apply all our material and technical resources to managing all activities with a view to meeting our current and potential customers' needs. Hence, we are committed to continuous improvement with the following goals:

- Compliance with applicable legal requirements along with other requirements that the organisation subscribes in relation to the needs and expectations that may affect the offered product.
- The appropriate development of a work system based on quality, minimising the consumption of resources and the prevention, reduction and

monitoring of contamination through the use of processes, practices, materials and/or products that enable this.

- In-depth knowledge of the expectations, requirements and risks of the stakeholders to ensure the fulfilment of the goals and satisfaction of all parties.
- Identification of the internal and external processes and factors that affect the organisation.
- Participation and motivation of personnel, since the collaboration, implication and work of all employees is essential for performing our activities.
- Promoting environmental awareness among employees.
- Commitment towards environmental protection, while incorporating circular economy into our business model.

The senior management of VIROSPACK will ensure this policy is disseminated, understood, applied and reviewed to ensure continuous adaptation. Thus, managing the dissemination among staff and stakeholders deemed pertinent through the necessary teams, media, environments and training.



Vicens Rodríguez
Senior Management



03

ENVIRONMENTAL PROTECTION COMMITMENT



3.1 ENVIRONMENTAL BEHAVIOUR

Environmental behaviour within VIROSPACK revolves around the environmental aspects identified within the company (figure 6). Each environmental aspect is assessed at least every quarter, except for emissions, which are monitored as established by the environmental license or in the event of changes.

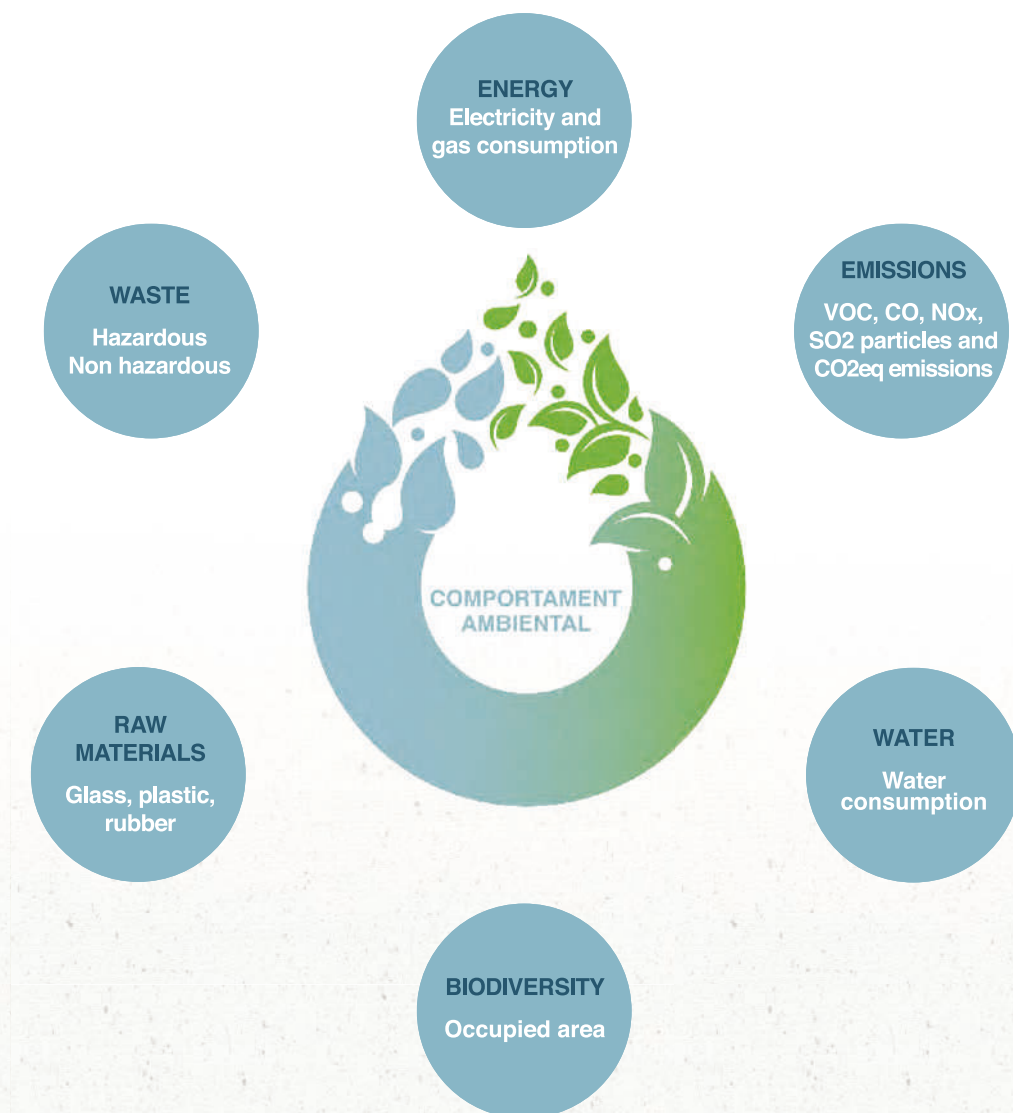


Figure 6. Environmental aspects leading to environmental behaviour assessment

Between 2015 and 2017, VIROSPACK built a new industrial warehouse and restructured its productive sections. This is reflected in the indicators, since the units produced at factory 1 undergoes a significant drop.

3.1.1 WATER

FACTORY 1: JULI GALVE BRUSSON, 19

This site, in spite of consuming the majority of water for sanitary use, also has a production process in which it consumes water for decoration (metallization and painting) (Figure 7), by which two indicators of water consumption are established: that used by the production process and the consumption of sanitary water/equivalent worker.

Production process

The consumption of paint lines in 2018 was 349 m³, i.e. 0,009 m³/units produced (in thousands of units).

Sanitary water

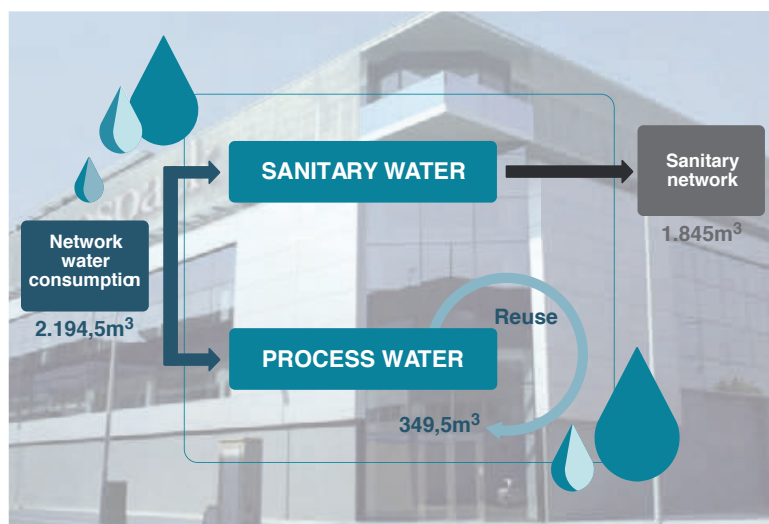


Figure 7. Use of water at Factory 1

Table 1. Evolution of water consumption at Factory 1

	2016	2017	2018
Total annual use of water (m ³)	2.279,5	2.698,5	2.194,5
¹ . Equivalent workers	154,3	131,67	159,77
Consumption per equivalent worker	14,77	20,49	13,74
Variation	-	38,73	-32,98

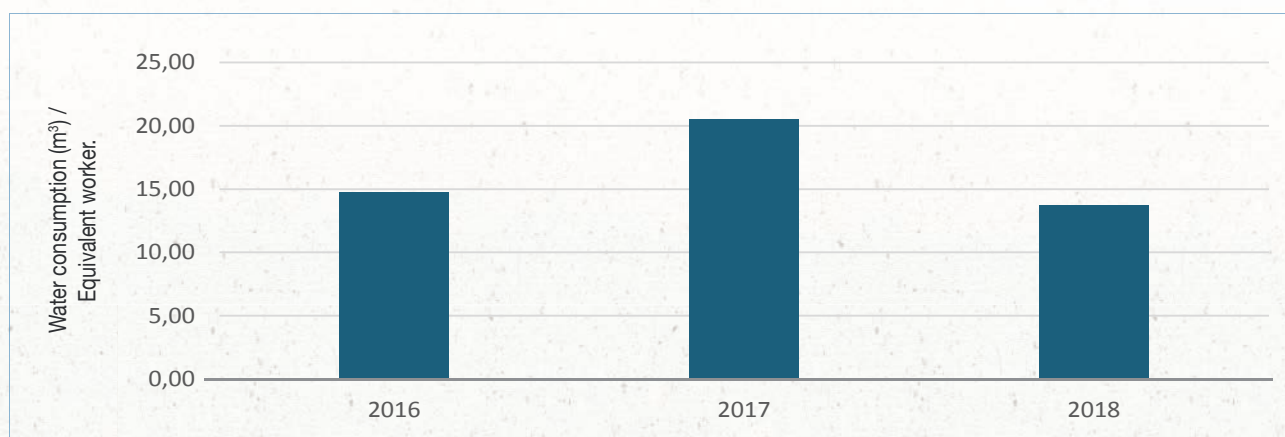


Figure 8. Water consumption per equivalent worker at Factory 1

Sanitary water consumption rose sharply in 2017. In order to evaluate the causes, meters were installed in the branches where water was used for production. In 2018 there was a 33% reduction compared to 2017 and a 7% decrease compared to 2016 (Figure 8, Table 1).

¹Technical note: The number of equivalent workers is calculated using the total hours worked/annual hours stipulated by agreement. In this way, reductions in working hours and absences are reflected in the indicator.

FACTORY 2: ALFONS XII, 555

Factory 2 does not consume water during the productive process, it only supplies sanitary water and cleanliness. The water consumed in this location is used exclusively for sanitary purposes and is intended to recover the small losses of refrigeration circuits.



Table 2. Evolution of water consumption at Factory 2

	2016	2017	2018
Total annual use of water (m ³)	751	1.503	2.284
¹ Equivalent workers	45,14	81,14	101,36
Consumption per equivalent worker	16,64	18,52	22,53
Variation	-	11,33	21,63

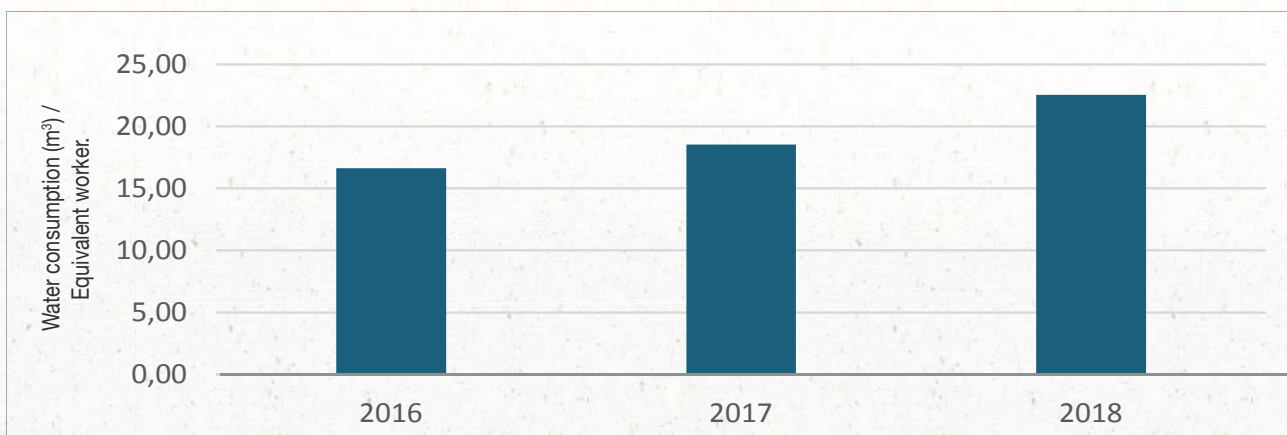


Figure 9. Water consumption per equivalent worker at Factory 2

There has been an increase in water consumption over the past three years due to the raise in the number of factory workers. The consumption per equivalent worker has increased 33.40%, which shows an increment of employees that showed at the end of the working day (figure 9). This positive variation is due to the change in the sampling conditions due to the building works carried out on the Factory, which, as can be observed from the data (table 2), causes a very notable increase in the number of equivalent workers.

3.1.2 WASTE

Waste is managed in accordance with Decree 152/2017, of 17 October, on the codification, classification and management procedures of waste in Catalonia and the corresponding guide (table 3). In the total waste calculation, dangerous and non-dangerous waste is included. This category includes landfill waste, recycled and valorized valued (iron). Apart from the waste indicated in Tables 4 and 5, toner (080317) and batteries (200133) are also generated which, due to their specific weight, are not included in the tables as main waste. Waste batteries in 2018 were 20kg in Factory 1 and 15kg in Factory 2, for which they were not considered significant. Toner was only generated in 150kg at Factory 1. ²

FACTORY 1: JULI GALVE BRUSSON, 19

Table 3. Evolution of waste generation at Factory 1

	2016	2017	2018
Total annual waste generated (kg)	261.250	315.610	310.889
Units produced (in thousands of units)	111.445	145.758	97.607
Generation per thousands of units (kg/k un)	2,34	2,17	3,19
Variation	-	-7,38	47,10

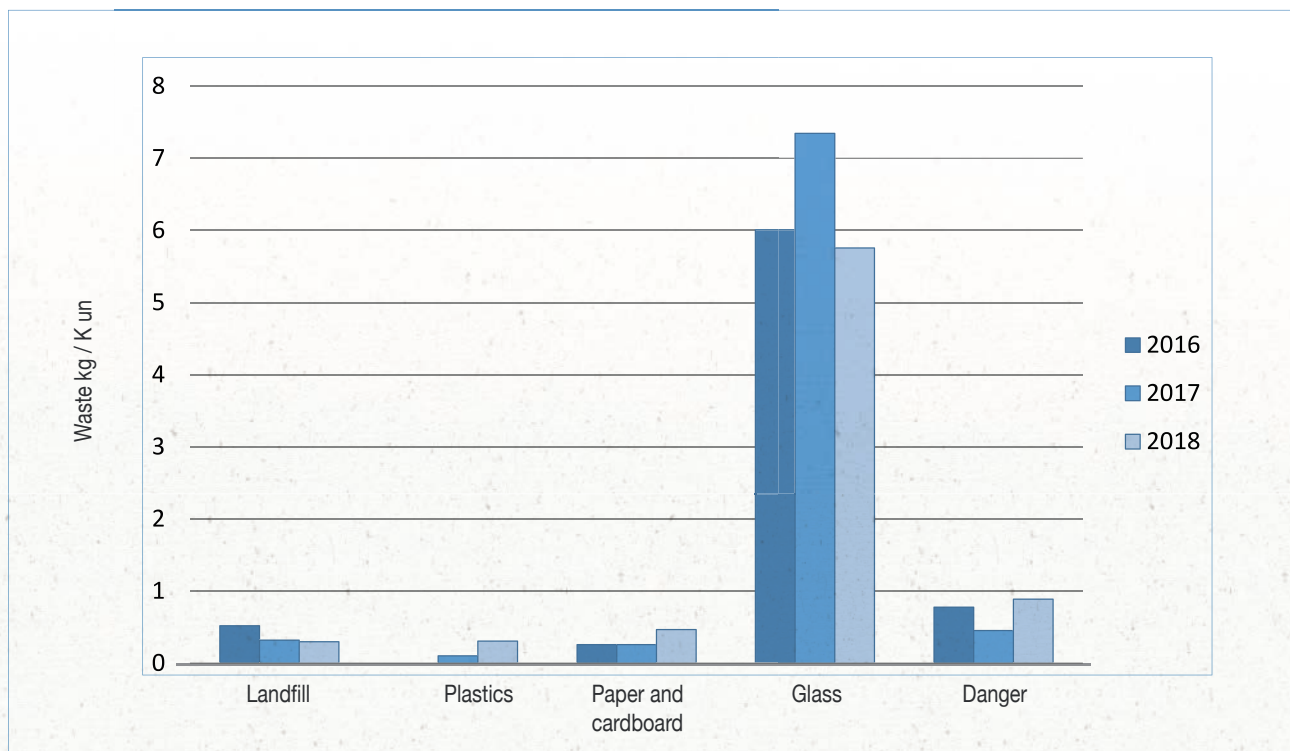


Figure 10. Waste generated according to type per unit produced at Factory 1

² Technical note: In order to adjust the data to the reality of each productive section, when a raw material can be associated with a single section the indicator is divided among the units produced from it.

Table 4. Generation of the main waste in 2018 and variation in relation to the year before Factory 1

Non- hazardous						
CER code	200301	080112	200139	200101	200138	200102
Waste	Landfill waste	Water-based paint	Plastic	Paper and cardboard	Wood	Glass
Waste generated (Tn)	29,31	6,24	30,17	45,87	2,22	107,22
Waste kg/k units produced	0,30	0,65	0,31	0,47	0,02	5,76
Variation	-6,69	110,16	198,85	82,54	130,22	SD
Treatment	R0306	D0905	R0306	R0305	R0306	R0503
	Landfill	Evaporation	Recycling			

Hazardous							
CER code	150110	150202	140603	080111	200121	130205	160504
Waste	Polluted containers	Polluted absorbents and filters	DNH	Paint sludge	Lights, bulbs and fluorescent	Non-chlorinated engine	Pressured containers
Waste generated (tn)	10,97	18,49	8,16	48,19	0,04	0,76	0,25
Kg Residus/k un produides	0,10	0,19	0,22	1,31	0,0004	0,0077	0,0025
Variation	52,66	141,80	18,78	24,89	161,33	-37,36	147,24
Treatment	R0314 - R0414	D1001	R0201	R0201	R1213	R0901	R1303 - R1
	Preparation for reuse	Incineration	Recovery and/or regeneration		Recycling or recovery	Regeneration of oils	Storage for recovery

In the case of reduced units produced at Factory 1 (due to the change of some sections), waste arising from auxiliary processes such as offices, maintenance or storage are not so diluted.

The decrease in landfill waste (200301) shows a better segregation of waste on the part of workers. On the other hand, plastic waste (200139) and cardboard waste (200101) have increased due to the increase in packaging received from suppliers. The increase in wood waste (200138) is due to the packaging of a new productive machine. This waste is considered punctual. On the other hand, the glass waste (200102), is altered due to the works, since one of the productive sections that have been modified is that of glass pipettes. In 2017 the section will be moved, which will donate the premises to the glass residue at Factory 2, where it was not previously generated. The pipette section is characterized to move a volume of units larger than that of jars and to produce a product with less weight. As for the impact of the residue relative to the decrease per unit produced, it is lower than in the case of jars. Since in 2017 the units produced were together in the same factory, there is no way to disaggregate which part was a consequence of each section. In order to have data comparable to the previous year, a specific indicator has been calculated in which the waste from the two sections have been added together and divided between the units produced. The result is a 22.89% decrease in glass waste, attributed to the acquisition of more efficient machinery. Dangerous waste has decreased in relation to 2016 but no increase has been observed in 2018 in relation to 2017.

Contaminated packaging waste (150110) has increased due to a raise in product purchases (from 9.8 t in 2016 to 10.97 t in 2018). These were usually packaged in small formats. However, during the year, with the aim of reducing special waste, possible changes in format to packaging with a higher volume of hazardous products have been studied.

With regard to water painting (080112), the maintenance of the painting cabins will be carried out and the water will be changed. The collection of 3.720 kg of the day 14/11/2018 and the collection of 800 kg of the day 28/11/2018 alter the results. If these data are isolated, the result is 1,720 kg, which represents a variation in relation to the previous year of -42%.

Within the global special waste sludge paint (080111), have a specific weight of 55% For this reason, efforts have been focused on dewatering the sewage sludge in order to reuse the water and reduce the weight of the waste. The tests carried out have not produced positive results due to the physicochemical characteristics of the sludge. A change in the drying methodology is established for 2019.

Contaminated absorbents (150202) increase due to an improvement in the stages of filtering metallized line gases to reduce atmospheric emissions.

Problems have been detected in the quality of the fluorescents. As a result, waste has increased by 161.33% (Table 4). A collaboration with another manufacturer has been initiated.

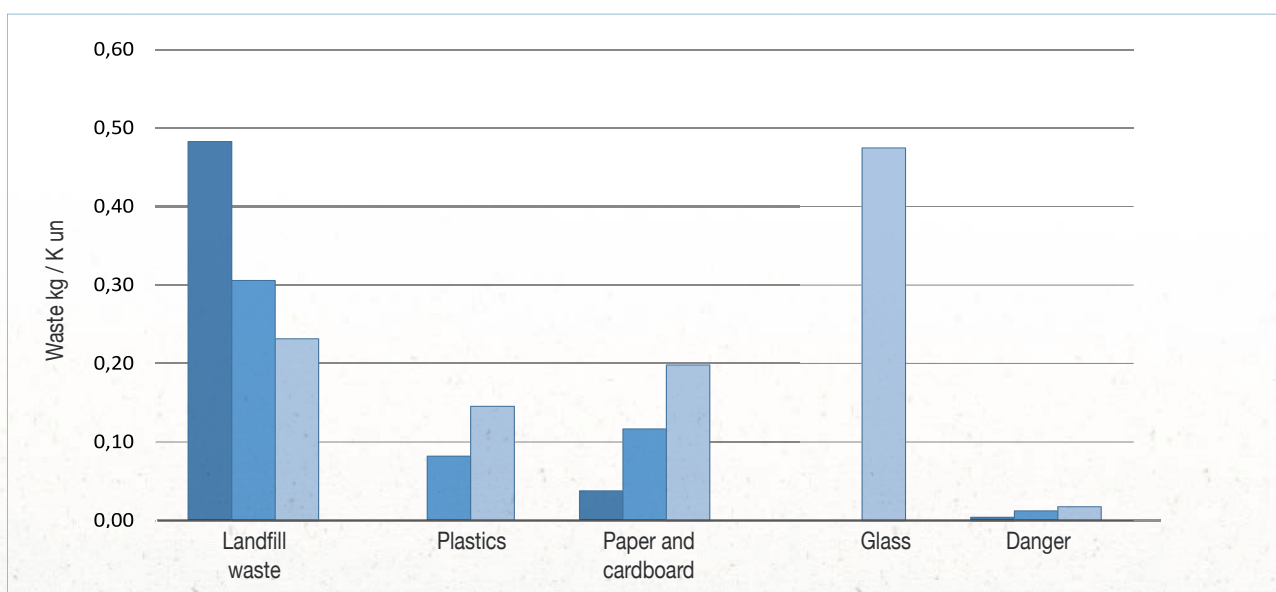
Table 5. Total annual generation of dangerous and non-dangerous waste at Factory 1

	2016	2017	2018
Total annual generation of non-dangerous waste (kg)	174.169	294.574	223.879
Total annual generation of dangerous waste (kg)	87.081	66.036	87.010

FACTORY 2: ALFONS XII, 555*Table 6. Evolution of waste generation at Factory 2*

	2016	2017	2018
Total annual waste generated (kg)	59.080	72.823	190.963
Units produced (in thousands of units)	112.611	140.983	271.884
Generation per thousands of units (kg/k un)	0,52	0,52	0,70
Variation	-	-1,54	35,98

If the classification of waste into non-hazardous and hazardous is considered, the variation for the period 2016-2018 is as follows:

*Figure 11. Waste generated according to type per unit produced at Factory 2*

There is a decrease in landfill waste (Figure 11) which is attributed to a better segregation of waste at source, which we see reflected in part in the generation of plastic waste.

Cardboard waste (200101) and plastic waste (200139) have increased along with sales of metal shell droppers, since metal shells, being a product susceptible to scratching, are transported with plastic trays and in a few units per box. Oil waste from non-chlorinated engines has increased due to the change of oil from six plastic injection machines and the cylinder (no data for 2016; 0.18 t for 2017, and 0.50 t for 2018, table 7).

Table 7. Generation of the main waste in 2018 and variation in relation to the previous year at Factory 2

Non-hazardous				
CER code	200301	200139	200101	200102
Waste	Landfill waste	Plastic	Paper and cardboard	Glass
Waste generated (Tn)	62,94	39,56	53,90	28,20
Waste kg/k units produced	0,21	0,15	0,20	0,47
Variation	-24,25	77,45	70,02	-
Treatment	R0306	R0306	R0305	R0503
	Landfill	Recycling		

Hazardous								
CER Code	150110	150202	130205	160504	160303	070201	160508	200121
Waste	Polluted containers	Polluted absorbents and filters	Non-chlorinated engine oil	Pressured containers	Formulation chemicals	Cleaning fluids and mother aqueous liquors	Expired chemicals	Lights, bulbs and fluorescent
Waste generated (tn)	0,52	0,73	0,50	0,04	0,60	2,27	0,02	0,035
Kg Waste/k units produced	0,0019	0,0027	0,0018	0,0001	0,0096	0,03	0,0003	0,0001
Variation	-	-46,58	56,51	-	-	80,86	-	-
Treatment	R0314 - R0414	D1001	R0901	R1303 - R1	D0902	D0901	D0901	R1213
	Preparation for reuse	Incineration	Regeneration of oils	Storage for recovery	Stabilisation for physical/chemical processing			Recycling or recovery

Table 8. Total annual generation of dangerous and non-dangerous waste at Factory 2

	2016	2017	2018
Total annual generation of non-dangerous waste (kg)	58.620	71.084,5	186.233,2
Total annual generation of dangerous waste (kg)	460	1.739	4.730

In the past year, the percentage of waste dedicated to recycling has increased (table 8). In 2016, 7.2% of total waste (in kg) was recycled. In 2018, this amount has increased to 63% of the total waste generated annually. In this way, the percentage of landfill waste (200301) disposed of at the landfill has decreased. The training of workers on recycling has been fundamental for a good segregation of waste. On the other hand, the separation and sale of scrap waste (aluminium, steel, etc.) has increased, representing 6% of the total and a profit of €1,628 by 2018.



3.1.3 EMISSIONS

In 2018, all the atmospheric emitting light sources comply with the emission limits established in the environmental license. The limits established in Spanish Royal Decree 117/2003, of 31 January, on the limitation of emissions of volatile organic compounds due to the use of solvents in certain activities, are applied to Factory 1 in the plating process.

The emissions from the focal points correspond to VOC, CO, NO_x, SO₂ and particles. The gases emitted are not greenhouse gases (IPCC, 2013) and, for this reason, are not converted to CO₂eq.

Concentrations are very low in all emitting sources of both industrial units with the exception of the sources associated with the plating lines. That is why it has been decided to focus efforts to reduce atmospheric emissions in this process.

On the other hand, in relation to the plan of control of leakage of hydrofluorocarbon gases (R410A) and (R407C), there were no leaks in any climate machine or refrigeration equipment during 2018.

FACTORY 1: JULI GALVE BRUSSON, 19

Table 9. Outcome from monitoring sources of atmospheric emissions in Factory 1

REF	CAPCA	DESCRIPTION	COMPOST	LEGAL LIMIT	Concentration (mg/Nm ³)	Load (kg)	Units produced (in thousands)	Consumption per produced units (kg/k un)
3FE-1	C 06 01 08 03	Metallization 1	VOC	20 mgC/Nm ³	12,03	864,65	23.732	0,0364
			CO	100 mg/Nm ³	12,16	875.348,19	23.732	36,88
			NO _x	450 mg/Nm ³	< 4,1	295.160,52	23.732	12,44
			SO ₂	200 mg/Nm ³	<0,51	33.858,69	23.732	1,427
			Particles	50 mg/Nm ³	<0,96	52.735,52	23.732	2,22
3FE-2	C 06 01 08 03	Metallization 2	VOC	75 mgC/Nm ³	34,1	2.559,27	13.138	0,19
			Particules	50 mg/Nm ³	<0,57	42,74	13.138	0,0033
3FE-3.1	-04 06 17 18	Paint	VOC	75 mg/Nm ³	19,63	599,57	9.549	0,063
			Particles	50 mg/Nm ³	0,76	28,14	9.549	0,0029
3FE-3.2	-04 06 17 18	Painting Oven	CO	100 mg/Nm ³	54	119,67	9.549	0,0125
			NO _x	450 mg/Nm ³	12,4	27,43	9.549	0,0029
			VOC	50 mg/Nm ³	33,93	69,39	9.549	0,0073
3FE-4.1	C 03 03 26 37	Glass section 1	CO	100 mg/Nm ³	11,03	503,57	12.130	0,0415
			NO _x	450 mg/Nm ³	18,67	852,19	12.130	0,0703
			Particles	50 mg/Nm ³	<0,7	31,97	12.130	0,0026
3FE-4.2	C 03 03 26 37	Glass section 2	CO	100 mg/Nm ³	11,37	201,19	6.493	0,031
			NO _x	450 mg/Nm ³	16,9	300,06	6.493	0,046
			Particles	50 mg/Nm ³	0,66	11,69	6.493	0,0018
3FE-5	- 06 02 04 04	Metallic deionized	Exempt from measurement					
3FE-6	C 06 04 03 03	Serigraphy + Deionized painting	VOC	75 mg/Nm ³	18,3	247,00	32.564	0,0076

On the other hand, for the first time this year, emissions from commercial trips have been taken into account with the aim of including them as a new environmental parameter to be quantified. Air travel to destinations in the United States, Asia and Europe and domestic rail travel emitted 34.31 t CO₂eq during 2018 (emissions calculator 2019, Catalan Office of Climate Change, figure 12).



Figure 12. Emissions from technical and commercial visits

FACTORY 2: ALFONS XII, 555

Table 10. Outcome from monitoring sources of atmospheric emissions in factory 2

REF	CAPCA	DESCRIPTION	COMPOST	LEGAL LIMIT	Concentration (mg/Nm ³)	Load (kg)	Units produced (in thousands)	Consumption per produced units (kg/k un)
1FE-1	C 03 03 26 37	Glass 1	CO	100 mg/Nm ³	<6,3	100,35	18.473	0,00543
			NOx	450 mg/Nm ³	5,23	322,36	18.473	0,01745
			VOC	50 mgC/Nm ³	3,6	55,14	18.473	0,00298
			Particles	50 mg/Nm ³	<1,1	9,87	18.473	0,00053
1FE-2	C 03 03 26 37	Glass 2	CO	100 mg/Nm ³	<6,3	117,41	16.270	0,00722
			NOx	450 mg/Nm ³	4,23	79,36	16.270	0,00488
			VOC	50 mgC/Nm ³	3,7	54,36	16.270	0,00334
			Particles	50 mg/Nm ³	<1,3	12,12	16.270	0,00075
1FE-3	C 03 03 26 37	Glass 3	CO	100 mg/Nm ³	<6,3	79,84	2.830	0,02821
			NOx	450 mg/Nm ³	4	52,16	2.830	0,01843
			VOC	50 mgC/Nm ³	2,3	34,47	2.830	0,01218
			Particles	50 mg/Nm ³	<1,2	7,72	2.830	0,00273
1FE-4	C 03 03 26 37	Glass 4	CO	100 mg/Nm ³	<6,3	77,61	21.853	0,00355
			NOx	450 mg/Nm ³	4,1	51,34	21.853	0,00235
			VOC	50 mgC/Nm ³	3,43	57,40	21.853	0,00263
			Particles	50 mg/Nm ³	<1,5	13,81	21.853	0,00063
1FE-5	- 03 01 03 05	Boiler 1	Exempt from measurement					
1FE-6	- 03 01 03 05	Boiler 2	Exempt from measurement					
1FE-7	C 06 03 05 03	Cylinder	Particles	50 mg/Nm ³	<1,1	3,08	2.674	0,00115
1FE-8	C 06 03 05 03	Rubber injection 1	Particles	50 mg/Nm ³	<1,3	5,17	25.202	0,00020
			SO ₂	50 mg/Nm ³	0,26	3,05	25.202	0,00012
1FE-9	C 06 03 05 03	Rubber injection 2	Particles	50 mg/Nm ³	<1	16,31	30.308	0,00054
			SO ₂	50 mg/Nm ³	4,56	144,81	30.308	0,00478
1FE-10	C 06 03 05 03	Rubber injection 3	Particles	50 mg/Nm ³	NOT EVALUABLE: speed less than 1 m/s			
			SO ₂	50 mg/Nm ³				

3.1.4 ELECTRIC POWER

FACTORY 1: JULI GALVE BRUSSON, 19

The evolution of electricity consumption at Factory 1 from 2016 to 2018 is as follows:

Table 11. Evolution of electric energy consumption from 2016 to 2018 at Factory 1

	2016	2017	2018
Total direct energy consumption (kWh)	3.935.933	4.496.908	4.332.331
Units produced (in thousands of units)	111.754	145.758	97.607
Consumption per produced units (kg/k un)	35,22	30,85	44,39
Variation	19,39	-12,41	43,87

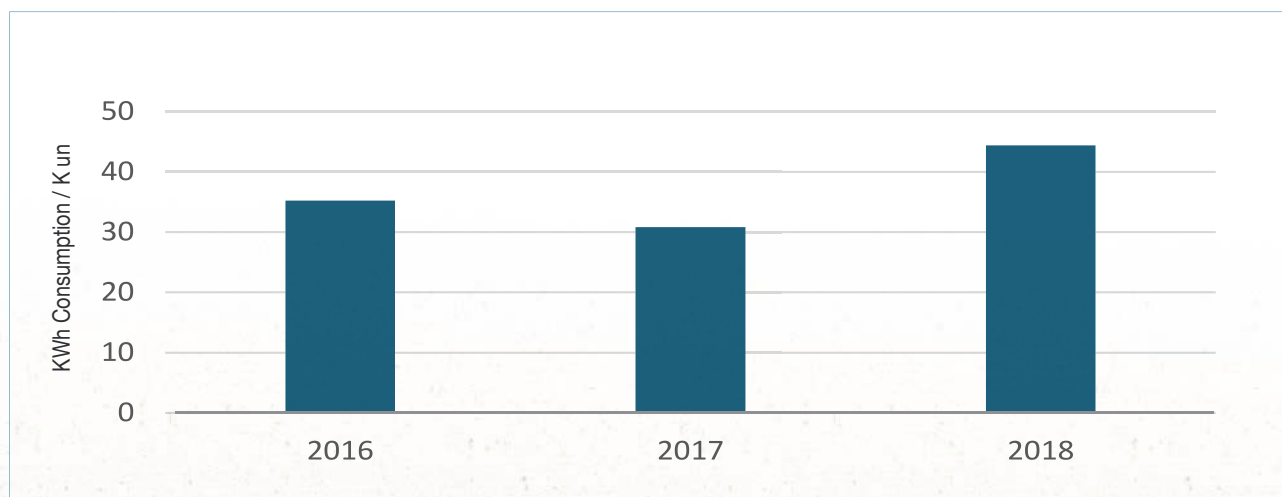


Figure 13. Electricity consumption at Factory 1 per thousands of units produced

The consumption per produced unit increases (Table 11, Figure 13). During the year an energy audit must be carried out to investigate the causes.

The emissions arising from energy consumption are 1,263, 1,443.5 and 1,390.7 Tn eq. CO₂ for the years 2016, 2017 and 2018, respectively. A conversion factor of 321 g CO₂/kWh is considered (Emissions Calculator 2019, Catalan Office for Climate Change).

According to the certificate of origin, the renewable energy consumed in 2018 at this point is 265,000 kw/h, which represents 6.12% of the total energy supplied. For this reason, the procedures for consuming green energy will begin in 2019.

FACTORY 2: ALFONS XII, 555

The evolution of electricity consumption at Factory 2 from 2016 to 2018 is as follows:

Table 12. Evolution of electric energy consumption from 2016 to 2018 at Factory 2

	2016	2017	2018
Total direct energy consumption (kWh)	813.973	1.097.956	3.339.066
Units produced (in thousands of units)	112.611	140.983	271.884
Consumption per produced units (kg/k un)	7,23	7,79	12,28
Variation	24,91	7,74	57,70

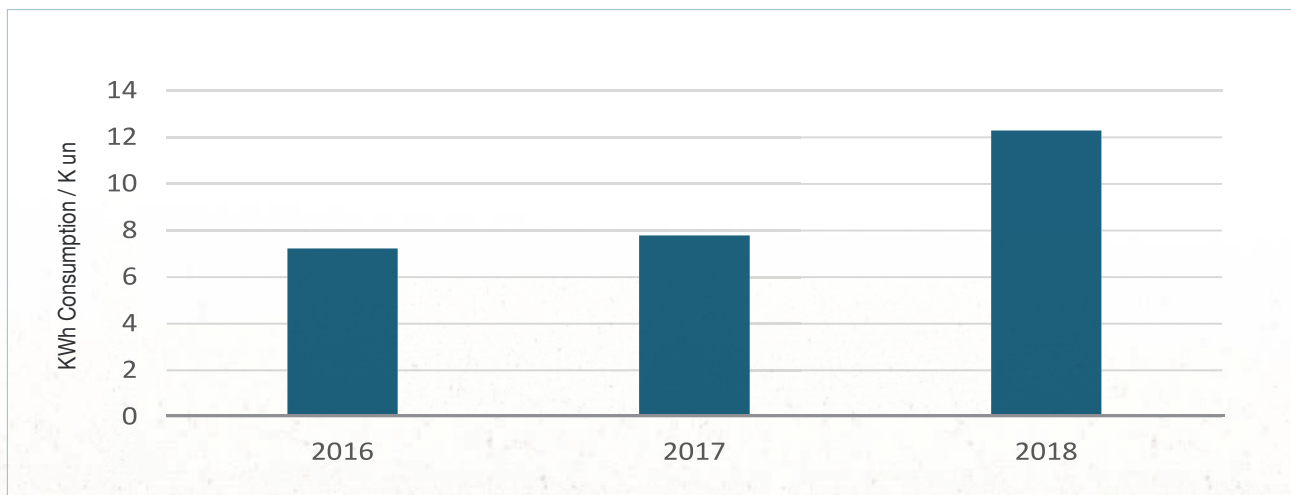


Figure 14. Electricity consumption at Factory 2

Consumption per unit produced is increasing (table 12, figure 14) and an energy audit has been carried out to investigate the causes. A small decrease in energy consumption is observed in this factory, which shows that at the time of the data collection all the machinery had not yet been introduced nor had all the production sections been air-conditioned.

Emissions are 261, 352 and 1,071 t CO₂ eq. for the years 2016, 2017 and 2018 respectively. A conversion factor of 321 g CO₂/kWh is considered (Emissions Calculator 2019, Catalan Office for Climate Change).

Energy consumption has increased due to the air-conditioning of all production sections and the recent incorporation of new compressors to Alfons XII (figure 14). An energy audit was carried out at the end of 2018 with the aim of continuing to reduce energy consumption in 2019. This audit shows that 10.36% of the company's energy consumption is used for air conditioning. Meanwhile, 13.18% is used for compressors.

On the other hand, the enlargement of the surface area by 1,141 m² has required more lighting, which also means an increase in energy consumption.

According to the certificate of origin, the renewable energy consumed in 2018 at this point is 231,000 kw/h, which represents 6.92% of the total energy supplied. For this reason, the consumption of green energy will begin in 2019.

3.1.5 GAS CONSUMPTION

FACTORY 1: JULI GALVE BRUSSON, 19

Table 13. Evolution of gas consumption from 2016 to 2018 at Factory 1

	2016	2017	2018
Total gas consumption (kWh)	2.035.237	2.500.150	2.530.675
Units produced (in thousands of units)	111.745	145.758	97.607
Consumption per produced units (kg/k un)	18,21	17,15	25,93
Variation	-	-5,82	51,16

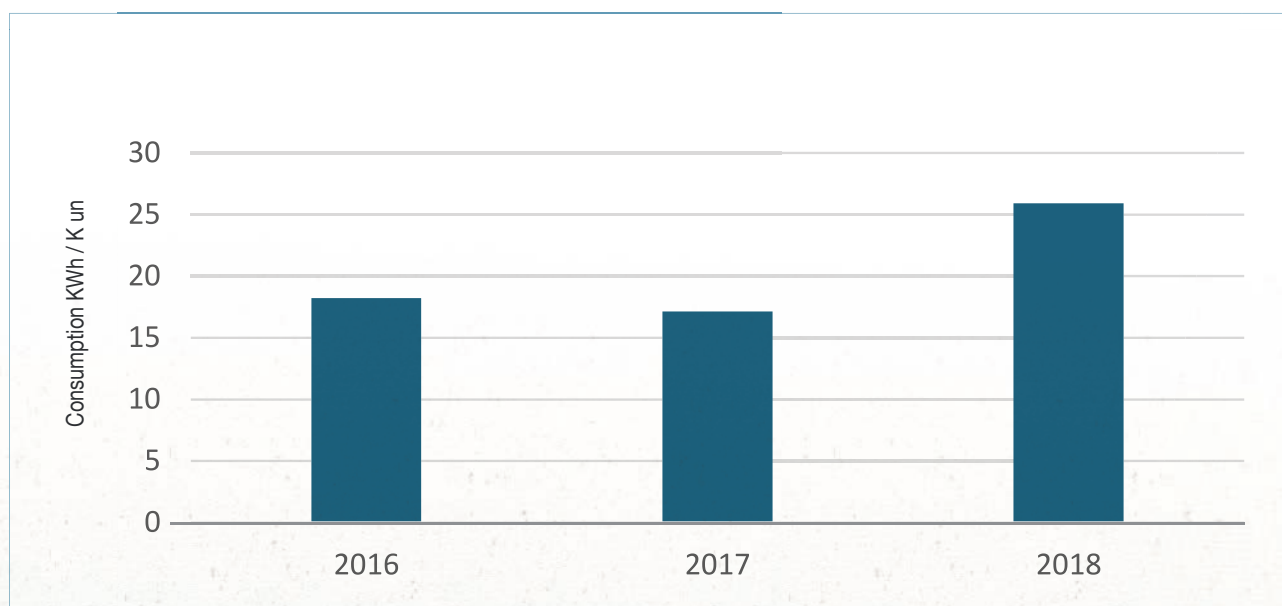


Figure 15. Gas consumption at Factory 1

The use of gas increases because of the raise in the number of machines with this operating consumption (table 13, figure 15).

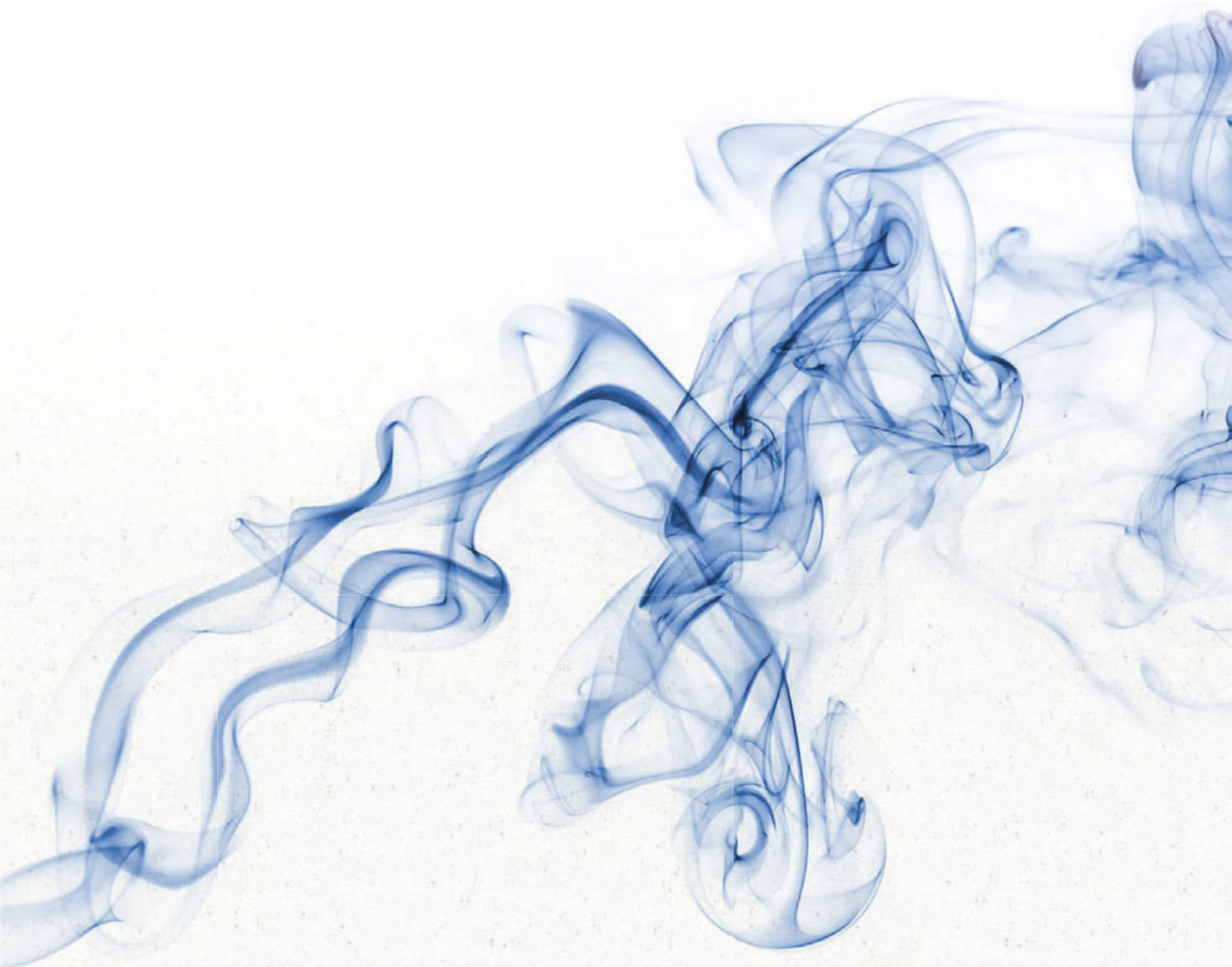
This plant has an RCO (Regenerative Catalytic Oxidation Incinerator) to reduce the concentration of VOCs emitted into the atmosphere. This auxiliary element cannot be associated with a produced quantity.

On the other hand, 2017 changed the location of pipette production from Factory 1 to Factory 2. This resulted in a reduction of the units produced to Factory 1. Since the reference indicator is directly related to the produced units, the peripheral equipment is diluted between the produced units. As the number of units decreases, the denominator is a smaller number, and this causes an increase in the indicator.

The emissions in the atmosphere derived from gas consumption were 372.32 t CO₂eq (2016), 457.37 t CO₂eq (2017) and 462.96 t CO₂eq (2018, emission calculator 2019, Catalan Office of Climate Change).

FACTORY 2: ALFONS XII, 555

Between 2015 and 2017 this Factory was refurbished. During this period, then, there was no natural gas. During January and July 2018 propane was used, and the rest of the year was produced with natural gas. Propane consumption was 123,342.64 kWh, which would be equivalent to 28.24 t CO₂ eq. Gas consumption in 2018 was 71,641 kWh, equivalent to 13.11 t CO₂ emitted into the atmosphere in five months (2019 emissions calculator, Catalan Office of Climate Change).



3.1.6 RAW MATERIAL CONSUMPTION

VIROSPACK is a company that works on an order basis and creates each product according to the design requested by the customer. It has a low level of influence of the variability of the products used since these are in function of the trends of the market.

FACTORY 1: JULI GALVE BRUSSON, 19

Table 14. Evolution of raw material consumption from 2016 to 2018 at Factory 1

		Water-ba- ses paint	Solvent- based paint	HS Paint	Addi- ves and colorants MET/PINT	Serigra- phy	HS Tape	Tubular glass
kg	2016	6.620,1	58.831,66	134	3.194,91	459,63	52,76	184.004,39
	2017	9.900,6	59.467,22	376,30	1.717,68	685,51	98,36	296.347,83
	2018	9.116	65.592,68	2.243,50	1.712,72	670,84	201,36	288.981,18
kg/k un	2016	1,58	2,55	0,006	0,14	0,02	0,002	14,23
	2017	1,27	1,73	0,011	0,05	0,03	0,004	15,10
	2018	0,95	1,78	0,061	0,05	0,02	0,006	15,52
Variation	2016	83,89	17,25	-	-3,19	-22,20	-	13,96
	2017	-19,70	-32,24	88,24	-63,96	20,91	51,14	6,12
	2018	-24,95	2,92	456,29	-6,96	-18,36	70,78	2,78

The consumption of HS paint is considered positive, as it shows the efforts made to change the composition of the paints and thus reduce emissions. HS orders have increased. There is no capacity to act with respect to the increase in consumption of this product.

FACTORY 2: ALFONS XII, 555*Table 15. Evolution of raw material consumption from 2016 to 2018 at Factory 2*

		Glue	Tubular glass	Rubber	Urea	Plastics
kg	2016	4.240	94.624,39	67.769,21	89.923,97	126.308,03
	2017	6.740	122.165,49	82.244,17	89.632,02	216.332,29
	2018	10.205	166.381,17	106.381,17	95.595,77	292.333,80
kg/k un	2016	0,25	2,91	1,77	3,34	2,65
	2017	0,27	2,75	1,81	3,40	3,53
	2018	0,46	2,80	1,71	3,34	3,41
Variation	2016	5,84	12,49	-13,29	-2,67	-18,03
	2017	11,32	-5,67	2,11	1,94	32,97
	2018	66,66	1,90	-5,54	-1,71	-3,34

As a result of an increase in the number of glue product orders, glue consumption increased by 66.66%, as it had been previously assessed (table 15). This reflects a trend during 2018 towards products requiring a gluing process.

The 1.90% increase in glass pipettes indicates that customer orders have been for longer pipettes. This figure is reinforced by the decrease in glass waste, which indicates that the small increase in raw material is not generated as waste and, therefore, production is more efficient

3.1.7 SOLVENT CONSUMPTION

During the year 2018, the company has completed an R&D project to change the chemical composition of paints, reducing their solvent content. That is why in this environmental statement, it has been decided to evaluate the evolution of the amount of solvent contained in the paints.

FACTORY 1: JULI GALVE BRUSSON, 19

Table 16. Evolution of solvent consumption from 2016 to 2018 at Factory 1

	2016	2017	2018
Solvent consumption (kg)	41.205,47	42.603,62	45.084,94
Units produced (in thousands of units)	23.061	34.403	36.871
Consumption per produced units (kg/k un)	1,81	1,24	1,22
Variation	-	-31,61	-1,26

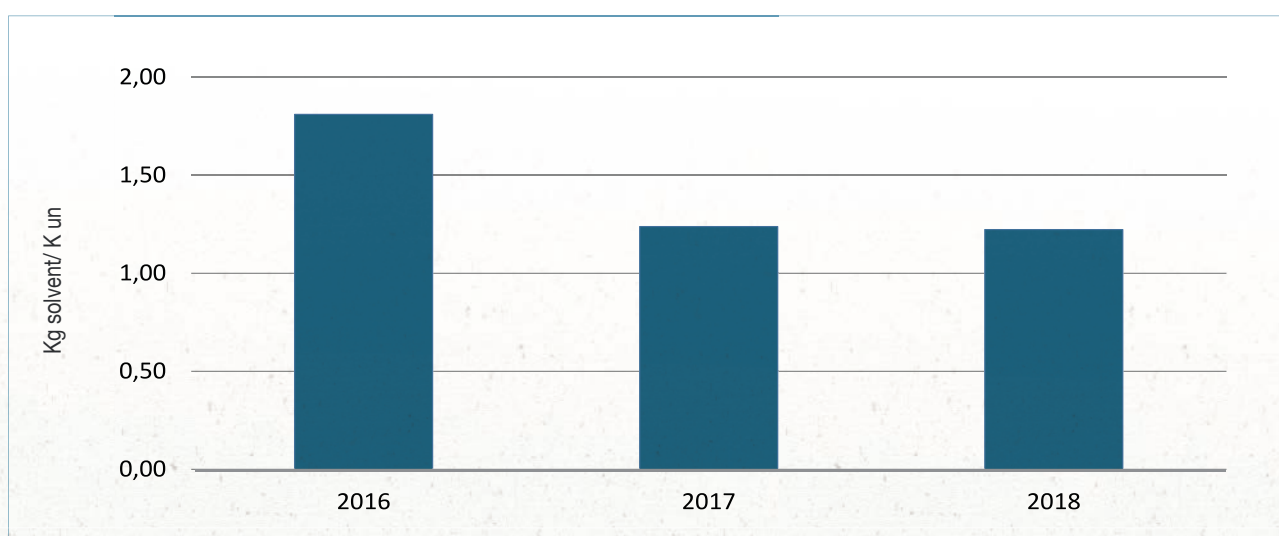


Figure 18. Solvent consumption

Solvent consumption is increasing as a result of research carried out to direct paint compositions towards paints with less solvents (Figure 16, Table 18). The parts that have been used for this research process are not counted as produced units, so the solvent used in these tests is imputed to the existing production. On the other hand, there is an increase in the consumption of HS paint, which is considered a positive aspect given that it shows a trend towards a decrease in the use of paints with solvents. This is the first year in which productions with the new paint begin to come out.

3.1.8 PACKAGING CONSUMPTION

Packaging consumption is considered positive when the indicators show the effort to reduce secondary packaging (table 17). This consumption, being material used for shipping, is not associated with any Factory.

Taula 17. Evolution of packaging consumption from 2016 to 2018

	2016	2017	2018
Packaging consumption (kg)	205.199	286.070	352.533
Kg of shipped product	571.760	771.665	998.009
Consumption per kg of shipped product (kg/kg shipped)	0,39	0,37	0,35
Variation	-	-5,74	-4,72

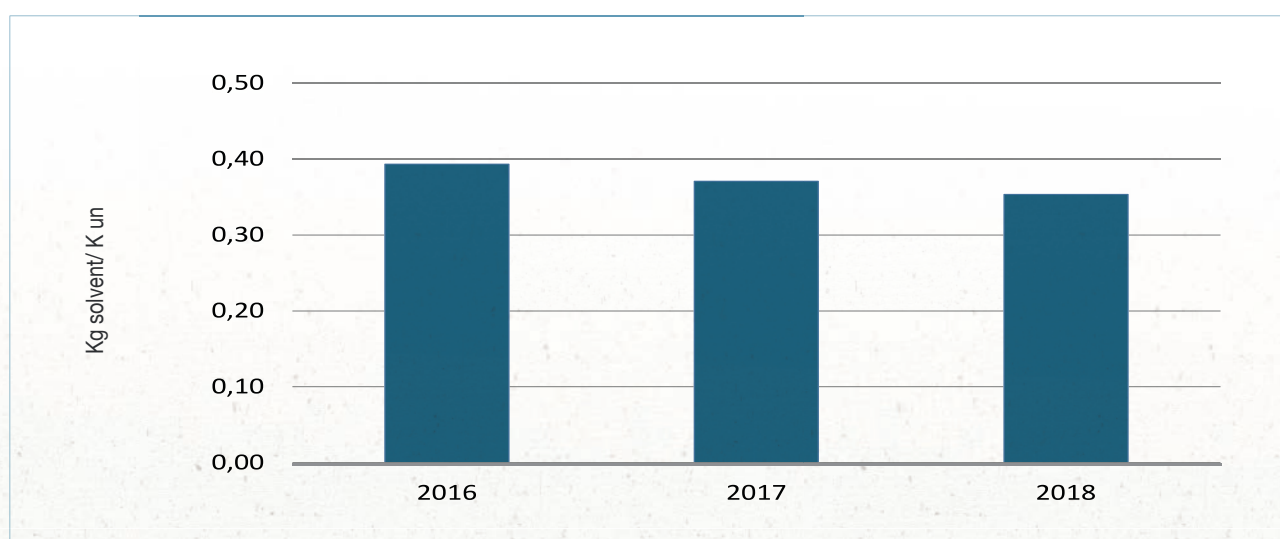


Figure 19. Packaging consumption

Between 2017 and 2018, a 40% reduction in plastic boxes and a 15% reduction in separators was achieved (Figure 19). Studies have been carried out to increase the number of containers per flag for shipment. A decrease of 7.15% in wooden pallets and 7.24% in film was also observed. These reductions are also reflected in the variation 2016-2017.

The increase in trays (0.89%) is not considered significant, despite the fact that 2019 will continue working to reduce use. Possibly the increase in foams and bags (+15.45% and +9%) is due to poor consumption practices. For this reason, staff training will be carried out.

During 2018, a new project called Ecodropper has been started that seeks to quantify the life cycle of products and create an alternative with less environmental impact.

3.1.9 BIODIVERSITY

VIROSPACK is located in the Badalona Sud industrial estate, a waterproofed area. The closest natural elements are the Besòs river, 1.5 km away, and the Badalona coastline, 2 km away. Hence we have considered the occupation of ground as a biodiversity impact indicator.

In 2016, we extended the surface area of factory 2 by 1,141 m² (table 20).

Table 18. Evolution of m² of occupied surface area from 2015 to 2018 of factories 1 and 2

	2015	2016	2017	2018
FACTORY 1 - JGB19	2.436,13	2.436,13	2.436,13	2.436,13
FACTORY 1 - AXII555	2.678,37	3.819,37	3.819,37	3.819,37



3.2 ASSESSMENT CRITERIA FOR DIRECT AND INDIRECT ENVIRONMENTAL ASPECTS

VIROSPACK assessed its environmental impacts from the perspective of analysing the life cycle and it also assesses the degree of incidence of each of its products' life cycle stages (figure 20).

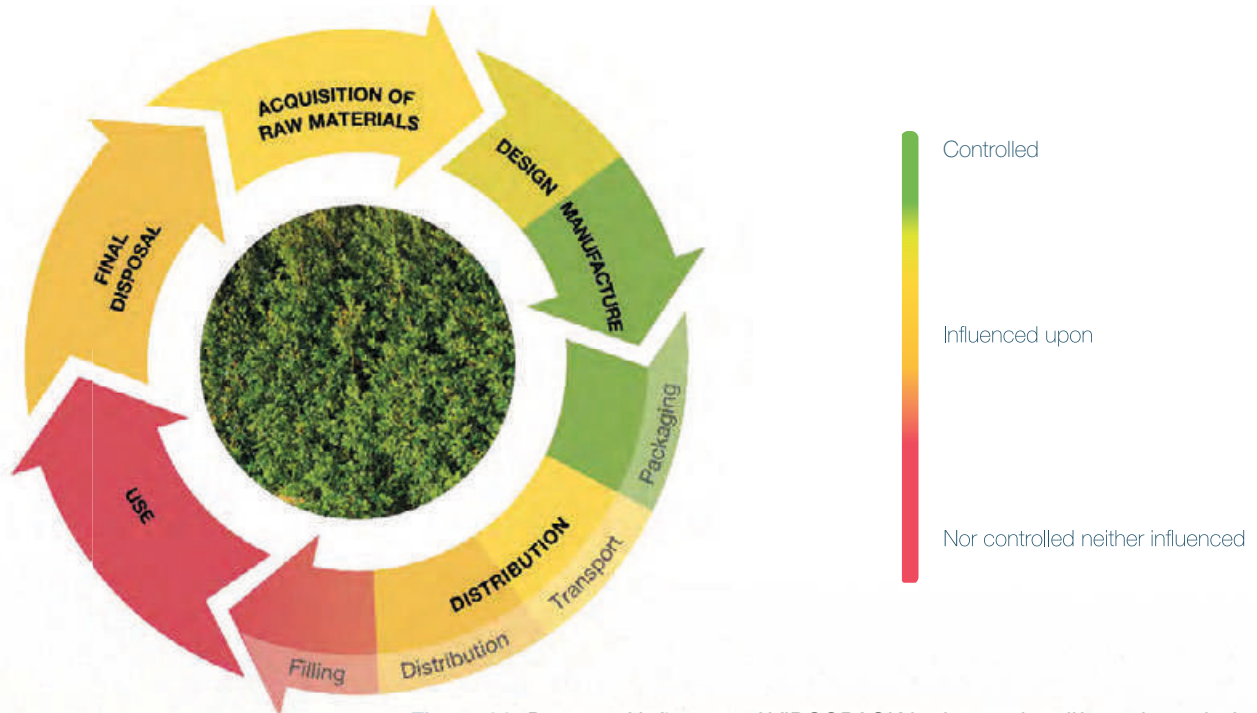


Figure 20. Degree of influence of VIROSPACK in the product life cycle analysis

In accordance with the life cycle analysis, we assess the environmental aspects of each of the stages. We consider an environmental aspect to be direct when we have control over its management (green) and indirect when there is influence (yellow). The environmental aspects over which we have no control or influence are not considered assessable environmental aspects (red).

Direct environmental aspects are assessed using the following criteria:

- Degree of potential contamination
- Frequency
- Quantity or volume
- Risk of legal non-compliance
- Improvement opportunity

Each section is scored based on whether the level is high, medium or low and is weighted according to the relevance it may have for each environmental vector.

The soil vector assessment has not been considered given that the company is located in a waterproofed industrial estate where production is distributed among four floors, of which the ground floor is a warehouse.

Table 19. Assessment criteria for direct environmental aspects

ENVIRON- MENTAL VECTORS		WASTE WATER AND WATER CONSUMPTION	WASTE	AIR	NOISE	ENERGY	RESOURCE CONSUMPTION	PACKAGING CONSUMPTION
DEGREE OF POTENTIAL POLLUTION	A:15	Water managed as hazardous waste	Hazardous waste	3. VOC + TCP + TPS	Not applicable (industrial area)	Use of electri- cal energy	Non-renewa- ble material	No recycling %
	M:10	Sanitary water	Non-hazar- dous waste sent to landfill	TCP + TPS		Use of natural gas	Renewable material	Less than 60% of recycled ma- terial
	B:5	Water reused in the process	Hazardous and non-ha- zardous was- te recovered	TPS		Use of renewable energy	Recycled material	More than 60% of recycled ma- terial
FREQUENCY	A:15	Not applicable	Not applicable	Not applicable	>66% operating time	Not applicable	Not applicable	Not applicable
	M:10				33-66% operating time			
	B:0				<33% operating time			
QUANTITY / VOLUME	A:20	m3 consumed / workers > average over the past 2 years +20%	t of waste ge- nerated / units produced > average over the past 2 years +20%	Not applicable	Not applicable	kWh consu- med / units produced > average over the past 2 years +20%	t of material generated / units produced > average over the past 2 years +20%	kr/kp > average over the past 2 years +20%
	M:10	m3 consumed / workers ± 10% of the average over the past 2 years +20%	t of waste ge- nerated / units produced ± 10% of the average over the past years +20%			kWh consumed / units produ- ced ± 10% of the average over the past 2 years +20%	t of material ge- nerated / units produced ± 10% of the average over the past 2 years +20%	kr/kp ± 10% of the average over the past 2 years +20%
	B:0	m3 consumed / workers < average over the past 2 years +20%	t of waste ge- nerated / units produced < average over the past 2 years +20%			kWh consu- med / units produced < average over the past 2 years +20%	t of material generated / units produced < average over the past 2 years +20%	kr/kp < average over the past 2 years +20%
LEGAL NON - COMPLIANCE RISK	A:30	Not applicable	Not applicable	Up to 45% below set limit	Up to 0.5 dBA below set limit	Not applicable	Not applicable	Not applicable
	M:10			Between 45% and 55% below set limit	Between 0.5 and 2 dBA below set limit			
	B:0			More than 55% below set limit	More than 2 dBA below set limit			
IMPROVEMENT OPPORTUNITY	A:10	There is a financially viable alternative						
	M:5	There is no financially viable alternative						
	B:0	No action required						
LEVEL OF SIGNIFICANCE = DEGREE OF POTENTIAL CONTAMINATION + FREQUENCY + QUANTITY/VOLUME + RISK OF LEGAL NON-COMPLIANCE + IMPROVEMENT OPPORTUNITY								
SIGNIFICANT ≥ 30								

³. Technical note: VOC: Volatil Organic compounds; TCP: Thermal combustion products; TPS: Total particles in suspension

Table 20. Assessment criteria for indirect environmental aspects

IMPACT	
A:2	Risk for the company image or for any of its activities
M:1	Risk of non-compliance with the company's environmental commitment
B:0	Non-significant due to low impact, as the associated stakeholder performs good management
INFLUENTIAL CAPACITY	
A:2	Aspect with clear influence and possibility of replacement or change, without non-viable repercussions
M:1	Aspect subject to medium possibility of influence or decision; may have impact on other processes
B:0	Aspect with very little or very limited influence
IMPROVEMENT OPPORTUNITY	
A:4	Existence of options for improvement with low forecast return period
M:2	Existence of options for improvement with forecast return period
B:0	Existence of options for improvement with high return period or there are no viable options for improvement
LEVEL OF SIGNIFICANCE = IMPACT + INFLUENTIAL CAPACITY + OPPORTUNITY FOR IMPROVEMENT	
SIGNIFICANT ≥ 5	

ASSESSMENT**A****High****M****Medium****B****Low**

3.3 SIGNIFICANT ENVIRONMENTAL ASPECTS

Following the assessment criteria established for 2018, the significant environmental aspects are those which have obtained more than 30 points if they are direct or more than 5 points if they are indirect, in accordance with the previous tables.

FACTORY 1: JULI GALVE BRUSSON, 19

Table 21. Significant environmental aspects of factory 1

DIRECT	
ENVIRONMENTAL ASPECTS	ENVIRONMENTAL IMPACT
PAPER AND CARDBOARD WASTE	Ground water eutrophication
PLASTIC WASTE	Impacts derived from the plastic recycling process
BULBS AND FLUORESCENTS WASTE	Impacts derived from processing
PRESSURED CONTAINERS	Impacts derived from processing
POLLUTED ABSORBENTS AND FILTERS WASTE	Impacts derived from processing
POLLUTED CONTAINERS WASTE	Impacts derived from processing
TONER WASTE	Impacts derived from processing
PAINT SLUDGE WASTE	Water and soil contamination
GLASS WASTE	Consumption of natural resources
WOOD WASTE	Atmospheric emissions
WATER-BASED PAINT WASTE	Ground occupation and contamination eutrophication of
VOC EMISSIONS	Smog formation
ELECTRICAL ENERGY CONSUMPTION	Consumption of non-renewable natural resources Atmospheric contamination Visual impact
GAS CONSUMPTION	Consumption of fossil fuels Generation of GHG emission
CARDBOARD PACKAGING CONSUMPTION	Consumption of non-renewable natural resources Deforestation
PRODUCT CONTAINING SOLVENT CONSUMPTION	Consumption of non-renewable natural resources Smog formation
SCREEN-PRINTING INKS CONSUMPTION	Consumption of non-renewable natural resources Atmospheric contamination
HS PAINT CONSUMPTION	Consumption of non-renewable natural resources
HS DYE CONSUMPTION	Consumption of non-renewable natural resources
INDIRECTE	
ECO-DESIGN	Landscape impact Ground occupation Ground

FACTORY 2: ALFONS XII, 555*Table 22. Significant environmental aspects of factory 2*

DIRECT	
ENVIRONMENTAL ASPECTS	ENVIRONMENTAL IMPACT
PAPER AND CARDBOARD WASTE	Ground water eutrophication Soil pollution
PLASTIC WASTE	Impacts derived from the plastic recycling process
BULBS AND FLUORESCENTS WASTE	Impacts derived from processing
CLEANING LIQUID WASTE	Ground water eutrophication Soil pollution
CONSUMPTION OF DYES AND ODOURANTS	Consumption of non-renewable natural resources
CONSUMPTION OF ANTI-DEGRADANTS AND PLASTICISERS FOR RUBBER	Consumption of non-renewable natural resources
GLUE CONSUMPTION	Atmospheric contamination Consumption of non-renewable natural resources
CONSUMPTION OF CARDBOARD PACKAGING	Consumption of natural resources Deforestation
WATER CONSUMPTION	Water pollution and eutrophication
INDIRECT	
CONSUMPTION OF MATERIALS FOR MANUFACTURING RAW AND ANCILLARY MATERIAL	Consumption of natural resources Atmospheric contamination Soil pollution Water contamination
TRANSPORTATION OF PRODUCT, RAW MATERIAL OR WASTE	Consumption of natural resources Atmospheric contamination Soil contamination



04

ENVIRONMENTAL PROGRAMME



4.1 ENVIRONMENTAL PROGRAMME

The 2019 objectives derive from the significant environmental aspects identified in 2018. The end dates for all objectives is December 2019.

FACTORY 1: JULI GALVE BRUSSON, 19

ASPECT	INDICATOR	OBJECTIVE	IMPROVEMENT ACTIONS
PAPER AND CARDBOARD WASTE GENERATION	kg waste/k units produced	≤95%	<ul style="list-style-type: none"> . Follow-up and monitoring of suppliers or product packaging . Internal transport in reusable plastic boxes
PLASTIC WASTE GENERATION	kg waste/k units produced	≤98%	<ul style="list-style-type: none"> . Separation of plastic according to type . Change in suppliers' packaging
LANDFILL WASTE GENERATION	kg waste/k units produced	≤98%	<ul style="list-style-type: none"> . Good practices and personnel training
ENERGY CONSUMPTION	kWh/k units produced	≤99,8%	<ul style="list-style-type: none"> . Energy efficiency monitoring
METALLIZED VOC EMISSIONS	Kg VOC/k units produced	≤98%	<ul style="list-style-type: none"> . Change of paint to HS
POLLUTED PACKAGING WASTE GENERATION	kg waste/k units produced	≤95%	<ul style="list-style-type: none"> . Increase of hazardous product container formats
SLUDGE WASTE GENERATION	kg waste/k units produced	≤95%	<ul style="list-style-type: none"> . Dried sludge . Container format increase project
ABSORBENT WASTE GENERATION	kg waste/k units produced	≤95%	<ul style="list-style-type: none"> . Use of reused cloths
GAS ENERGY CONSUMPTION	kWh/k units produced	≤99%	<ul style="list-style-type: none"> . Start-up deviation monitoring, format changes . Preventive maintenance monitoring

FACTORY 2: ALFONS XII, 555

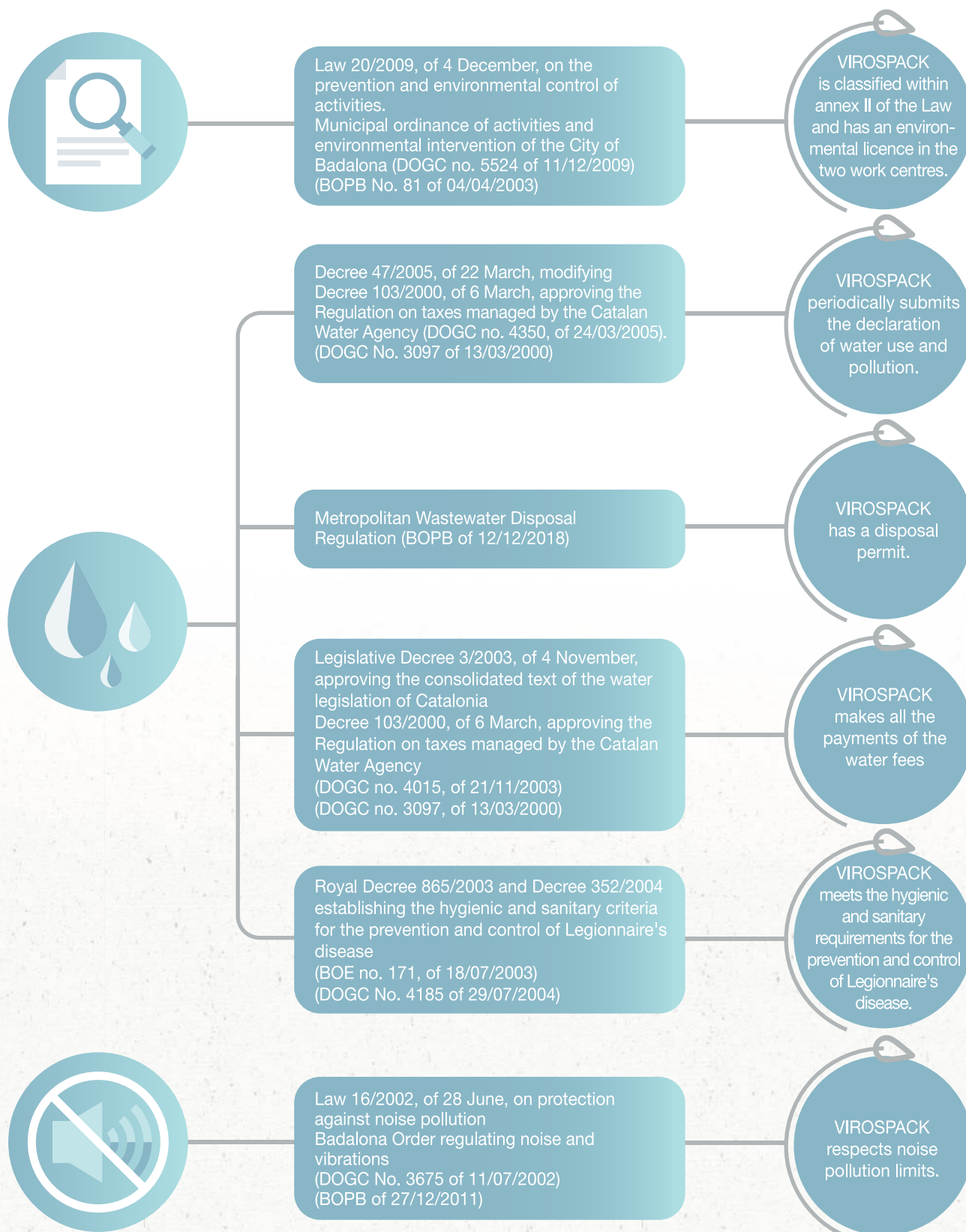
ASPECT	INDICATOR	OBJECTIVE	IMPROVEMENT ACTIONS
PAPER AND CARDBOARD WASTE GENERATION	kg waste/k units produced	≤95%	<ul style="list-style-type: none"> . Follow-up and monitoring of suppliers or product packaging . Internal transport in reusable plastic boxes
PLASTIC WASTE GENERATION	kg waste/k units	≤98%	<ul style="list-style-type: none"> . Plastic segregation according to type . Change in suppliers' packaging
LANDFILL WASTE GENERATION	kg waste/k units	≤98%	<ul style="list-style-type: none"> . Good practices and personnel training
WATER CONSUMPTION	M³/workers	≤99%	<ul style="list-style-type: none"> . Good practices and personnel training

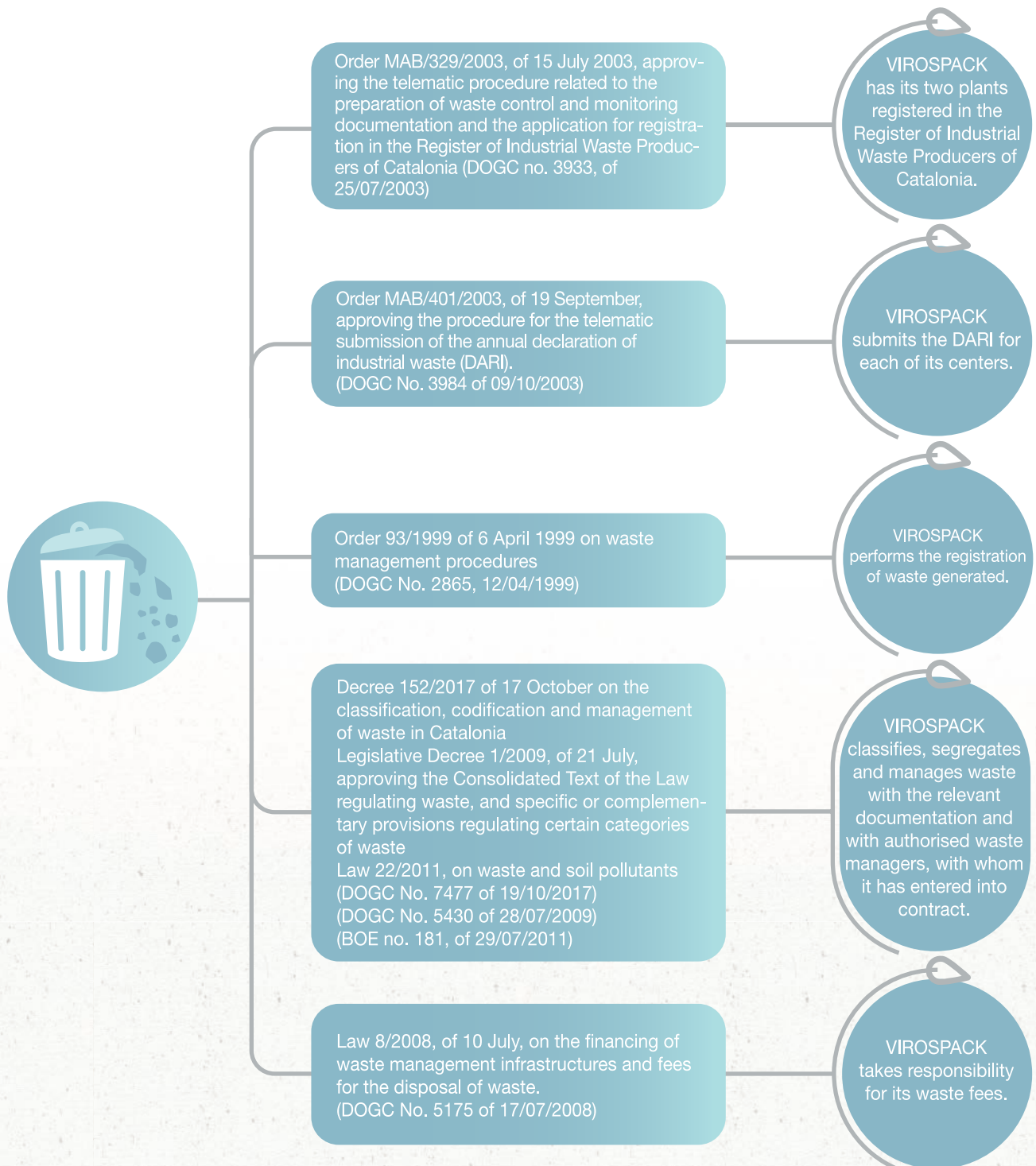
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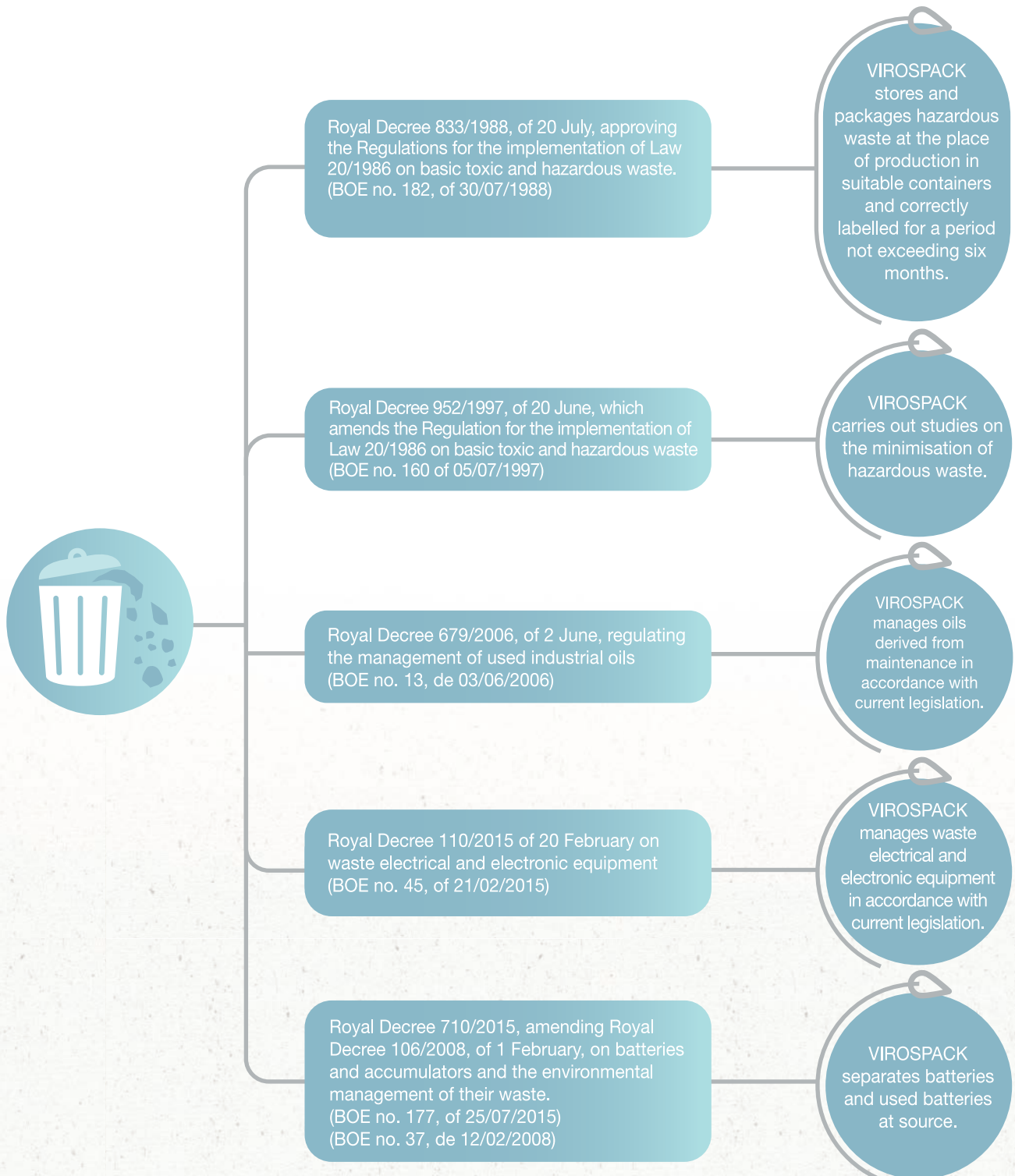
LEGAL COMPLIANCE

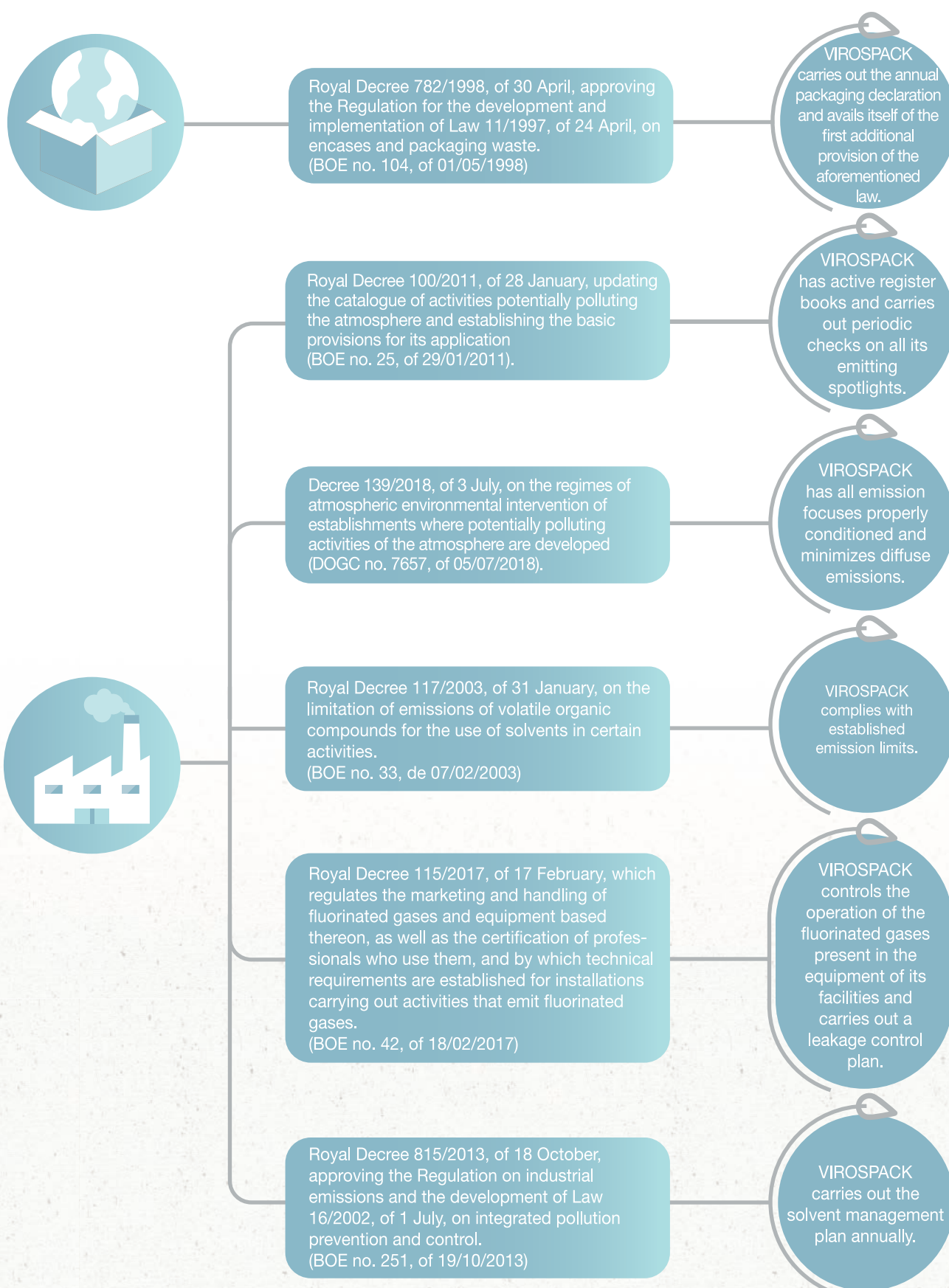


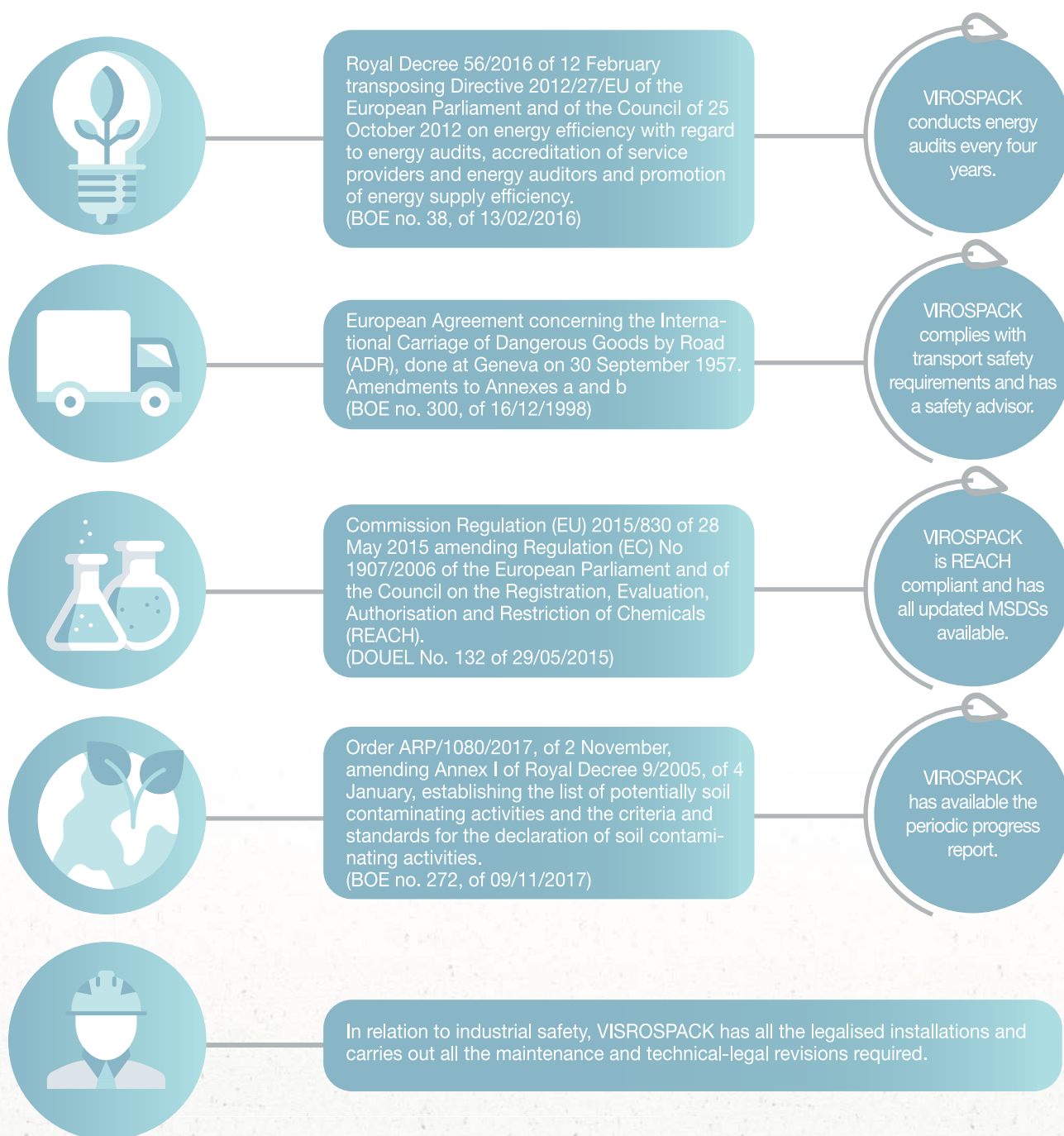
5.1 COMPLIANCE ASSESSMENT











All legal updates are implemented through a specific programme with a six-monthly frequency.

06

VERIFIER'S DATA



6.1 VERIFIER'S DATA

In accordance with REGULATION (EC) 1221/2009, amended in accordance with REGULATION (EU) 2018/2026

Environmental verifier accreditation No.: 004-V-EMAS-R i ES-V-0010

Validation date: 31/07/2019



Drafted by:

Aida Rodríguez
Environmental Manager
Member number: 2038



Approved by:

Vicens Rodríguez
Senior management

This declaration will be updated annually and will be submitted to the competent body.

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